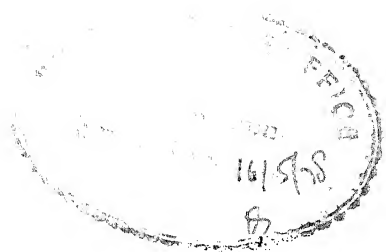


A METHODOLOGICAL INQUIRY INTO THE FOUNDATIONS
OF THE PHILOSOPHY OF LANGUAGE IN THE LIGHT OF
TRANSFORMATIONAL GENERATIVE GRAMMAR

A Thesis Submitted
In Partial Fulfilment of the Requirements
for the Degree of
DOCTOR OF PHILOSOPHY

By
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to the
DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES
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May, 1978



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CONTENTS

	Page
Synopsis	vii
Chapter 1 Introduction	1
Chapter 2 Wittgenstein, Linguistic Naturalism and Theory of Language	37
Chapter 3 Linguistic Constructionism and Ideal Language Theory	107 37
Chapter 3 Wittgenstein, Linguistic Naturalism and Theory of Language	107
Chapter 4 Transformational Generative Grammar and Theory of Language	169
Bibliography	237

SYNOPSIS

A METHODOLOGICAL INQUIRY INTO THE FOUNDATIONS OF THE
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TRANSFORMATIONAL GENERATIVE GRAMMAR

Ph.D. dissertation submitted to
Indian Institute of Technology
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This thesis is an attempt to indicate a new direction for the philosophy of language. Its basic purpose is to show that the philosophy of language, as it is currently practised, is inadequate to its task, and to indicate the direction in which a reorientation can be brought about. In this sense, the present investigation can be regarded as an inquiry into the foundations of philosophy of language. It is not concerned with any particular problems of the philosophy of language but with a metaphilosophical problem viz. the direction which the philosophy of language must take.

The main argument rests on the premise that the philosopher's approach to natural language is inadequate. One group, that of the ideal language philosophers, discards, natural language on the ground that it is amorphous; they develop an artificial ideal language. Ordinary language philosophers, on the other hand, accept that natural language is perfectly in order as it is. It is, however, to be studied in use and not through an elaborate process of theorizing.

Our main preoccupation is to show that these two approaches are inherently incapable of providing well-motivated solutions to the major philosophical problems treated by them. The central position of this thesis is that the philosophy of language must concern itself with the structure of language, which can best be approached through a theory of natural language.

Chapter 1 of the thesis is concerned with three major problems: (1) to show the essential relationship that exists between philosophy and language, (2) to introduce the main argument of the thesis through an examination of the two major approaches to the philosophy of language and (3) to show how linguistics can contribute substantially to our programme.

Chapter 2 is on the method of ideal language philosophy and the nature of its theory of constructed language. It starts by giving an exposition of the method of ideal language philosophy and then, on the basis of a critical examination, tries to show the built-in shortcomings of the whole approach.

We agree with the ideal language philosophers' stand with regard to the inadequacy of the traditional grammatical analysis but do not agree with their solution of the problem. It is not at all necessary to replace natural language by constructed systems in order to reveal its logical form. In fact, because of its wrong methodology the ideal language theory is shown to be arbitrary and conceptually impoverished.

Chapter 3 is on the method of ordinary language philosophy. The central theme of discussion is Wittgenstein, linguistic naturalism and theory of language. Ordinary language philosophers define language in terms of its use. The meaning of a word is accordingly determined by the functions it performs. Thus, for the ordinary language philosophers, language implies only communication, and meaning is defined in terms of rules of usage. From their stand it follows that there is nothing in the structure of language which cannot be acquired as inductive extrapolation from observed regularities in speech behaviour. All these elements of ordinary language philosophy lead its proponents to deny the significance of the basic distinction between la langue and la parole or that between the underlying system or structure and its manifestations in actual utterances.

The central argument against the ordinary language philosophers is that language cannot be viewed as solely performance-oriented, nor can it be defined solely in terms of communication. Ordinary language philosophers have failed to provide any principled insight into the nature of linguistic structure. Their failure in this respect leads them to some implausible conclusions concerning the nature of language. Consequently the arguments they provide for their philosophical theses have remained inconclusive.

In the final chapter, a new approach to the philosophy of language has been suggested based on the transformational

generative theory of language. This approach is completely different from that of both the ideal language and ordinary language philosophies, though it does not totally negate the other two. It sides with ideal language philosophers insofar as it attempts to develop a theory of linguistic structure in the form of a formalized system. But the structure that it formalizes is that of natural language and not that of an artificially constructed one. This formalization provides a theoretical description of the speaker's intuitive knowledge of his language. Ordinary language philosophy has indeed given recognition to such knowledge but goes wrong in its belief that the problem of the structure of language is totally resolvable in the study of its use.

One of the major thrusts of the discussion is to show that linguistics has a distinctive character of its own, quite different from that of the natural sciences. It is a human science developed in the tradition of Geisteswissenschaften and demands a framework adequate to its nature. Indeed, within linguistics, grammar has a very special place. It can be construed as a system of explication whose purpose is to clarify the concept of correct sentence. In this conception, grammar, as a theory of language, can indeed be shown to play a very significant role in the philosophy of language.

INTRODUCTION

Any investigation into the domain of reality, whether natural or human, starts with certain presuppositions. These presuppositions provide the underlying conceptual framework in terms of which concrete studies are carried out, and have important methodological implications. Methodology, then, implies a certain order of philosophical commitment which is very often not stated in an explicit manner. To make these presuppositions explicit and to clarify them with the help of analytical tools is a philosophical task.

The present investigation is an attempt to indicate a new direction for the philosophy of language. Its basic purpose is to show that the philosophy of language as it is currently practised is inadequate to its task and to indicate the direction in which a reorientation can be brought about. In this sense, the present investigation can be regarded as an inquiry into the foundations of the philosophy of language. Our investigation is not concerned with any particular problems of the philosophy of language but with a metaphilosophical problem, viz. the direction which the philosophy of language must take. The major contention of the present work is that a change in the philosophy of language can be brought about by utilizing the theoretical tools developed in modern linguistics.

To this end we will try to show how linguistic philosophy and philosophy of language both stand to gain from the recent developments in linguistics. The study is based on a cross-disciplinary approach which argues for a broad-based position in the philosophy of language. In order to achieve this the present investigation views critically the principal approaches employed in the modern philosophy of language. Metaphilosophy in this sense is indispensable to philosophical analysis. Since philosophy is necessarily reflective in character and since a philosopher must necessarily engage in a critique of his own enterprise, it follows that metaphilosophy precedes philosophy. Indeed the present inquiry in this sense can be characterized as the metaphilosophy of language.

This chapter has three sections. In section one, an attempt is made to show the essential relationship that exists between philosophy and language. In section two, the actual problem with which this investigation is concerned is broadly indicated. Section three contains arguments to show how linguistics can contribute substantially to our programme. An attempt has also been made to answer the possible objections that may be raised with regard to such a programme.

Language and Philosophy

Language is a phenomenon of immense complexity. Philosophers have tried to understand and explain the nature

of language from the standpoint of their respective inquiries. In the perspective of history, we find two reasons which have primarily led philosophers to the study of language. First, language is viewed as a distinctively human possession which differentiates men from other animals. The study of language could be said to be concerned with man's understanding of himself as a species that lives by communication, or, as the Cartesian philosopher would say, understanding of language leads to the understanding of human nature. Second, language has been studied for the more practical reason that many difficulties arise from its misuse. It has been recognized how an uncritical use of language can create hopeless confusion. Thus language must be properly investigated in order that we may avoid distorting it or being misled by it. This is what philosophers like J.L. Austin have called a "relook at the world without blinkers".

That philosophy has an intimate relationship with language is further evidenced by the fact that in order to be conceived, thought and understood, a philosophical problem has to be formulated in language. Language acts as a necessary condition for philosophical thought since it is impossible to think, to believe, to act or to be conscious without making vocal or subvocal use of language. Thus the philosopher is interested in exploring and systematising the logic of words. Though preoccupation with language has been a distinctive feature of twentieth century philosophy, philosophical interest

in language is not of recent origin. There is an unbroken line of investigation running from the pre-Socratic period to the most recent times.

Investigations of the meaning, use, and logic of words and expressions are to be found in Aristotle, Anselm, Thomas Aquinas, Locke, Kant, Hume and several others. But traditionally it was felt that however important the investigation into language might be, such an endeavour was only a preliminary to the ultimate task of philosophy, i.e. that of arriving at an adequate conception of the nature of the world and of setting standards for human society and conduct. Thus, for philosophers, particularly those with a strong leaning toward speculative metaphysics of the traditional variety, interest in the study of language was either peripheral or instrumental. But recently there has been a growing conviction among philosophers that the traditional speculative quest has not provided us with a sufficient basis for substantive conclusions about philosophical questions, and that philosophers should be more concerned with the analysis of the basic concepts we employ in thinking about the world and human life.

It is evident from a cursory look at the development of philosophy, that the emphasis has gradually shifted from speculation to analysis. Language, especially after the second world war, has become an independent subject of study for philosophers as well as for scientists, both social and natural.

In fact since the beginning of the third quarter of the present century it ^{has not been} / considered at all necessary to give a justification for undertaking a study of language. All this is clear not only from the development of modern linguistics, anthropology, and information sciences, but also from the increasing number of philosophical studies of language. We are no longer surprised when we are offered philosophical theories in the form of linguistic proposals. Gilbert Ryle goes to the extent of saying that "philosophical arguments have always, if not entirely, consisted in attempts to thrash out "what it means to say so and so"" (Ryle, 1967:85).

Among the first to formulate such an idea and put it in philosophical practice were Frege and Russell around the turn of the century. G.E. Moore later on contributed significantly to the development of this movement by his 'commonsense' method of philosophizing, though he disclaimed any interest in language as such. Ofcourse, Wittgenstein was the most influential proponent of the linguistic conception of philosophy. It was first through his book Tractatus, published in 1922, and then through his later works of the thirties and forties, that Wittgenstein converted a large number of philosophers to the view that philosophy is essentially linguistic.

A modern philosopher, or more appropriately, an analytical philosopher, in his investigation into problems like 'knowledge', 'causality', 'moral obligation' etc., may formulate his problem in three different ways. For example, with regard

to the problem of causality, he could proceed in one of the following ways (Alston, 1967:388):

- (1) He could undertake an investigation into the nature of the causal relation.
- (2) He could analyse the concept of causality.
- (3) He could try to make explicit what it is to say that one thing follows causally from another. This is, in other words, to find out what is the meaning of the word 'cause'.

Linguistic philosophers would readily accept the formulation (3). For them (1) and (2) become acceptable only when they are taken as alternative formulations of (3). Otherwise, (1), taken independently of (3), would imply that the philosopher's task was to assume the existence of causality as a thing which is independent of linguistic discourse. Similarly taking (2) independently of (3) implies that the philosopher's task is to analyse a concept as an objectively existing thing and to discover what its parts are and how they are related. But they also argue that there is no objective technique available to the philosophers for performing such a task. Now, if the formulation (3) is taken as a canonical form, it follows that so long as philosophy is taken as conceptual analysis, it must deal with language.

One may question the above view as a grossly linguistic characterization of philosophy, but it is a fact of recent philosophical history that philosophy has leaned more and more upon the analysis of language. Some modern

philosophers who did their work in the early part of this century have appealed to the underlying structure or sets of presuppositions about language to explain the meaning of certain concepts. This is precisely what has been done by Russell in his distinction between logical and grammatical form. This was used as one of the reasons to explain the failure of natural language as against ideal language in picturing the structure of reality. Wittgenstein in his separation of surface grammar from depth grammar and Austin in his three-fold analysis of speech acts into locutionary, illocutionary and perlocutionary, develop their insight into the functioning of language in newer dimensions resulting in far-reaching implications for both philosophy and linguistics.

In order to understand the philosophical involvement with language, it is necessary first to realize that the philosophical inquiry cannot be treated at par with first order inquiries (i.e. physics, biology, psychology etc.) meant for explaining, interpreting and predicting things about man and his environment. Human knowledge is a vast conglomeration of various conceptual systems such as those of physical, mental and social sciences, as well as those of religion, myth, magic and commonsense. It is in terms of these systems that we comprehend the enormously complicated structural interrelations and interactions of nature.

Each system in its inquiry raises some fundamental questions about itself. These questions are external to the system and may be called extra-systemic; nevertheless they are extremely important for a clear understanding of the system. Some of these questions are: What is a scientific theory? How do theoretical principles differ from laws? How are theories and laws confirmed by evidence? etc. Philosophical inquiry begins precisely when such questions are raised. They constitute a large part of its subject matter. It thus turns out to be a metatheoretical inquiry, i.e. it is an inquiry in which the first order disciplines are themselves made objects of study. A psychologist, for instance, investigates such psychological phenomena as seeing, hearing, etc., in short, phenomena of perception. A philosopher also studies 'perception'. But he does not study perception as a psychological phenomenon. His interest is to study the problems which arise by the use of such perception-verbs as 'to see', and 'to hear'.

We have indicated above that the first and foremost involvement of philosophy with language arises from the fact that philosophy is an investigation into the meaning of terms used in special first order inquiries. In elaborating this idea we will employ the Carnapian notion that philosophical arguments are basically in the formal mode of speech. We make judgements, statements and assertions about things and persons. Philosophical problems arise out of our reflection on all these. One of the well known problems, for example, is the problem of

other minds. We often say that someone looks happy, worried, or is in pain. This shows that we can understand the feelings of others. But when we reflect on this we doubt our claim to know what we ordinarily think we know. Thus we ask, "How can I really know that someone has such and such a mental state when all I can see is the movement of the body?" This is, in other words, to say "What does it mean to attribute states of mind to others?" We identify objects, such as tables, chairs, etc. But when we reflect upon our knowledge of objects we doubt whether we have the right to describe them in such terms as "I see a table before me".

Thus a fundamental distinction between the material mode of speech and the formal mode of speech is presupposed in raising philosophical questions. According to Carnap, natural languages in which philosophical investigations are carried out have two modes, viz. the material mode and the formal mode. When a sentence is made as an assertion about actual things or events, rather than about a linguistic construction, it is said to be in the material mode. The formal mode occurs when an assertion is made about linguistic constructions, their properties and relations. The formal mode of speech indicates how a shift can be made from talking about things happening in the world to talking about the way language is used to describe things happening in the world.

We have tried so far to indicate in a preliminary way the manner in which philosophers get involved with language.

We will now try to distinguish the three important phrase, philosophy of language, linguistic philosophy and philosophy of linguistics.

Philosophy of language is a vast area whose boundary has not been so far clearly defined. It is primarily concerned with the analysis of certain general features of language such as meaning, reference, truth, verifications, speech acts, logical necessity, etc. One of the distinctive features of language is its unique position in the realm of human communication which bestows on the philosophy of language a distinctive position of its own. The structure of conceptual knowledge is then inextricably tied up with the structure of language, since it is through a linguistic framework that knowledge is structured, expressed and communicated. It is in this sense that we claim that the philosophy of language has a very different status from that of any other branch of philosophy.

Linguistic philosophy, on the other hand, is a method employed for a conceptual investigation of any kind based upon the structure and functioning of natural or artificial languages. Examples of linguistic philosophy may be as varied as Aristotle's reflections on being, Russell's theory of descriptions, and Ryle's work on mental concepts. Linguistic philosophy is thus basically a method whereas philosophy of language is a substantive inquiry.

Philosophy of linguistics is a recent development. It could be viewed as a branch of philosophy of science, just like

the philosophy of psychology or the philosophy of physics. The central questions that are asked in this inquiry are: What is the nature of a linguistic fact? What is the relation between facts about a particular language and facts about language in general? How are linguistic theories verified? In what sense are grammars and dictionaries real? What is the relation between linguistics and psychology?

Clearly, philosophy of linguistics in the sense in which it is defined above is different from both philosophy of language and linguistic philosophy. It is in this sense, as Zeno Vendler (1967:4) rightly pointed out, that the position held by Katz in his early writings was wrong when, he along with Fodor, claimed that "the philosophy of language should be considered as nothing other than the philosophy of linguistics: a discipline analogous in every respect to the philosophy of psychology, the philosophy of mathematics, the philosophy of physics etc." (Fodor and Katz, 1962:221). In his later works Katz recognized his error and modified his position accordingly. The revised view put forward by Katz was that ^{the} philosophy of language is an investigation of conceptual knowledge based upon the general theory of language which is "the theory in descriptive linguistics that represents the facts about linguistic structure common to all natural language" (Katz, 1966:8).

Katz's later view not only seems to be reasonable but also represents a new point of view in the philosophy of language. It is in fact a departure from the conventional view

of the philosophy of language. Though Vendler is more sympathetic to this view, he still thinks that it is a narrow view of the philosophy of language. Vendler's remark is indeed questionable, but without going into the merits and demerits of his objection we hold with Bar-Hillel (1970:151) that the modern philosophy of language in its investigation should seek help from the theory of linguistics developed by Chomsky and his school. Indeed, as John R. Searle (1971:12) remarks, the transformational generative approach to language represents a third approach in the philosophy of language.

Though we are in basic agreement with Katz's new way of doing the philosophy of language, this will be shown to be the result of a critical examination of the nature of Chomsky's theory of language. Indeed our examination will reveal a sharp difference ^{between} / Katz and Chomsky in their approach to the study of language and philosophy. In spite of their appeal to Cartesian thought, Chomsky, Katz, and others explicitly accept the basic axioms of the positivist philosophy of science. In fact they have modelled their whole investigation in the framework of the positivist methodology of science. The acceptance of the Hempel-Oppenheim model (viz. the D-N Model) and consequently their insistence on linguistics as an empirical science clearly spells out their neopositivistic bias.

If it is claimed that linguistics is an empirical science and also claimed that it has foundational significance for philosophy, then the onus of showing how an empirical science

can be foundational to conceptual analysis is on the claimant. In his approach, Katz did not address himself to this basic question. In our work, on the other hand, we will not advance any theory regarding the relevance of linguistics to philosophy without first examining the nature of the former.

It will be one of our main aims to show that linguistics has a distinctive character of its own quite different from that of the natural sciences. It is more like a human science developed in the tradition of Geisteswissenschaften and demands a framework adequate to its nature. Indeed within linguistics, grammar has a very special place. As Chomsky has himself pointed out, grammar is a theoretical description of the speaker's intuitive knowledge of language. It can be construed as a system of explication whose purpose is to clarify the concept of a correct sentence. Thus Chomsky says:

"A grammar of a language purports to be a description of the ideal speaker-hearer's intrinsic competence"

(Chomsky, 1965:4)

and again,

"The fundamental aim in the linguistic analysis of a language L is to separate the grammatical sequences which are the sentences of L from the ungrammatical sequences which are not sentences of L and to study the structure of grammatical sequences. The grammar of L will thus be a device that generates all of the grammatical sequences of L and none of the ungrammatical ones"

(Chomsky, 1957:13)

In this conception, grammar, as a theory of language, can indeed be shown to play a very significant role in the philosophy of language.

Such a conception of linguistics has been held in recent years by Rinden, Itkonen, and others. In spite of our general agreement with them we distinguish ourselves from authors like Itkonen, who hold that linguistics does not make any contribution to philosophy. "In their positivist zeal," says Itkonen, "transformationalists have failed to understand that a particular science, e.g., T.G. linguistics (whether or not it is falsely interpreted as a natural science) cannot answer genuinely philosophical questions" (Itkonen, 1975a:429). We, on the other hand, hold that linguistic philosophy in its investigation depends in a quite significant way on the theory of language. The view that the linguistic philosophers have of language influences their analysis. That is to say, the way a linguistic philosopher proceeds in his investigation will depend on certain general conceptions which he has with regard to how words mean and how they relate to the world. Now it is only on the basis of such a general theory of language that one can undertake such a philosophical task. A proper understanding of the nature of language is therefore essential for undertaking any philosophical investigation related to language.

As we indicated earlier, Katz does not provide any satisfactory answer to the basic question why philosophy of language needs a theory of natural language. On this issue his treatment especially of the Oxford school and Wittgenstein is inadequate. Katz does not make any serious effort to examine

Wittgenstein's basic metaphilosophical position which gave a new dimension to the philosophy of language. In fact Katz's exposition and evaluation of Wittgenstein is too short and, in a sense, simplistic. In our discussion, both of the ideal and the ordinary language, we have made a full length attempt to answer the basic question of why there is a need for a theory of natural language.

2 .

An Outline of the Inquiry

In this section we will present an outline of our investigation. The purpose is to delineate the overall perspective within which we shall be evaluating the two already existing approaches to the philosophy of language. This should indicate the structure of our argument.

Modern philosophy of language is basically dominated by two modes of philosophic thought. The first, developed on the basis of the work of Ayer, Russell (in Principia Mathematica), early Wittgenstein, Carnap and others, is known as the ideal language philosophy. The other arose out of the work of the later Wittgenstein and the Oxford school and is called ordinary language philosophy. The chief concern of both these schools is the adoption of the linguistic approach to the understanding of logical form and philosophical problems in general. Philosophers belonging to both these traditions believe that the questions of philosophy are basically questions of language and hence any

attempt to answer these questions must be based on the knowledge of linguistic form. The history of philosophy shows that it is the lack of the awareness of linguistic form and the uncritical use of language that led philosophers to develop speculative metaphysics. Gustav Bergmann has brought out the common grounds shared by the two schools in the following words:

All linguistic philosophers talk about the world by means of talking about a suitable language. This is the linguistic turn (that philosophy has taken in the first half of the century), the fundamental gambit as to method, on which ordinary and ideal language philosophers agree. Equally fundamentally, they disagree on what is in this sense a 'language' and what makes it 'suitable'. Clearly one may execute the turn. The question is why one should. Why is it not merely a tedious round about? I shall mention three reasons.... First. Words are used either ordinarily (commonsensically) or philosophically (technically). On this distinction, above all, the method rests. The prelinguistic philosophers did not make it. Yet they used words philosophically. Prima facie such uses are unintelligible. They require commonsensical explication. The method insists that we provide it.... Second. Much of the paradox, absurdity, and opacity of pre-linguistic philosophy stems from failure to distinguish between speaking and speaking about speaking. Such failure, or confusion, is harder to avoid than one may think. The method is the safest way of avoiding it. Third. Some things any conceivable language merely shows. Not that these things are literally "ineffable"; rather, the proper (and safe) way of speaking about them is to speak about (the syntax and interpretation of a) language.

(Bergmann, 1964:177)

From the above passage we see clearly that where these two schools differ is in their views regarding the suitability of natural language as a vehicle for the expression of philosophical questions.

The ideal language philosophers believe that any attempt to formulate philosophical questions in the idiom of natural language would lead to hopeless confusion. What they suggest therefore is the construction of an ideal artificial language into which it is possible to translate the sentences which are either sentences of mathematical truth or matters of fact or philosophical statements whose linguistic form could be revealed after syntactic analysis. Any philosophical claim which is not translatable into the corresponding formal mode is regarded as a meaningless piece of metaphysics. On the question of constructing artificial languages, ideal language philosophers hold two different positions. For some, the construction of an artificial language is a way of improving or reforming natural language, whereas for others it is a replacement for natural language for technical purposes. In spite of the differences among them, they agree that the purpose of a constructed language is to show that all philosophical statements are either about language or about nothing, and that an artificially constructed language would help philosophy in the same way in which the modern axiomatic approach has helped physics and related disciplines.

The second approach to the philosophy of language is the ordinary language approach which holds that philosophical questions have been difficult to resolve since they are formulated in natural languages. In other words, they start with the same presupposition about the amorphousness of

language, but react in the opposite way. They believe that any attempt to theorize about the structure of natural language is futile. On the other hand, the construction of an ideal language is not only unnecessary but also impossible. In this connection, we quote P.F. Strawson who, while examining the ideal language philosophy of Carnap said:

(The aim of clarifying philosophical problems that motivates the construction of an ideal language) will seem empty, unless the results achieved have some bearing on the typical philosophical problems and difficulties which arise concerning the concepts to be clarified. Now these problems ... have their roots in ordinary, unconstructed concepts, in the elusive, deceptive modes of functioning of unformalized linguistic expressions If the clear mode of functioning of the constructed concepts is to cast light on problems and difficulties rooted in the unclear mode of functioning of the unconstructed concepts, then precisely the ways in which the constructed concepts are connected with and depart from the unconstructed concepts must be plainly shown. And how can this result be achieved without accurately describing the modes of functioning of the unconstructed concepts? But this task is precisely the task of describing the logical behaviour of the linguistic expressions of natural languages; and may by itself achieve the sought-for resolution of the problems and difficulties rooted in the elusive, deceptive mode of functioning of unconstructed concepts .

(Strawson, 1963:512-513)

The ordinary language philosophers thus conclude that the chief task of linguistic philosophy is to clarify the concepts of ordinary language that give rise to various philosophical puzzles and obscurities. In their effort to do this they concentrate on the description of the details of linguistic use. This is essentially the Wittgensteinean method employed in the

Investigations. The later Wittgenstein abandoned his earlier enterprise and created another framework in order to deal with the question of logical form. In the Tractatus, Wittgenstein had assumed that the precise depiction of logical form is achieved by reducing a sentence to a set of logical simples and their relations. But the later Wittgenstein holds that clarity about form comes not from penetrating the logical depths of sentential structure to reveal logical simples, but rather from comparing and contrasting the ways in which sentences are used in different spheres of life. In place of the Fregean notion of logical form or meaning which Wittgenstein himself adopted in the Tractatus, he now introduced the idea that meaning lies in the public use of linguistic form, i.e. in the ways in which speakers actually use sentences for the purpose of communication.

From this it follows that philosophy does not need to develop a theory which would account for the heterogeneity of linguistic phenomena. Theorizing about a highly systematic underlying reality as an explanation for surface heterogeneity is quite uncalled for. As Wittgenstein says:

"... We may not advance any kind of theory. There must not be anything hypothetical in our considerations. We must do away with all explanations, and description alone must take its place. And this description gets its power of illumination - i.e. its purpose - from the philosophical problems. These are, of course, not empirical problems; they are solved, rather, by looking into the workings of our language, and that in such a way as to make us recognize those workings: in spite of an urge to misunderstand them. The problems are solved, not by giving new information, but by arranging what we have always known.

Philosophy is a battle against the bewitchment of our intelligence by means of language".

(Wittgenstein, 1953:109)

In their approach to language, ordinary language philosophers and ideal language philosophers, though they adopt two radically different standpoints, start with the same critical presupposition. In the ideal language philosophers' programme the idea of the amorphousness of language has been expressed very clearly. Thus Carnap, one of the foremost exponents of ideal language philosophy, has said:

"In consequence of the unsystematic and logically imperfect structure of the natural word - languages (such as German or Latin), the statement of their formal rules of formation and logical transformation would be so complicated that it would hardly be feasible in practice".

(Carnap, 1937:2)

Again,

"The fact that natural languages allow the formation of meaningless sequence of words without violating the rules of grammar, indicates that grammatical syntax is, from a logical point of view, inadequate. If grammatical syntax corresponded exactly to logical syntax, pseudo-statements could not arise. If grammatical syntax differentiated not only the word - categories of nouns, adjectives, verbs, conjunctions etc., but within each of these categories made the further distinctions that are logically indispensable, then no pseudo-statements could be formed.... This is the great philosophical importance of the task, which at present occupies the logicians, of building a logical, syntax".

(Carnap, 1952:68)

It is quite apparent from the above remark of Carnap that he and the philosophers of his persuasion saw the shortcomings of the traditional grammatical analysis.

Traditional grammatical analysis was content to demarcate the broad categories into which words and sequences of words could be classified in accordance with some traditionally inherited categories of thought, modes of signification, etc. most of which can be traced to the grammar of Latin. The purpose of this kind of analysis was not to generate "all and only the sentences of a language", as Carnap implies, but to train and discipline the mind in certain modes of thinking. The purpose was not the one that Carnap and Wittgenstein themselves set before, viz. to reveal the logical form of language. The logical form of thought was their main concern, and traditionally Latin had been regarded as the language revealing this form in a perfect way. Other languages were at best approximations, and to the extent their grammatical form did not correspond exactly with the grammatical form of Latin, they were incomplete and 'barbaric' languages.

However, to agree with Carnap in his view of the inadequacy of traditional grammar is not to agree with his solution of the problem. It is not at all necessary to replace natural language by constructed systems in order to reveal its logical form. This, as we shall see, is the lesson of transformational grammar for ideal language theory. The fault, in other words, lies not with language, but with the attempted description of language. What transformational grammar has shown is that, in the first place, no description of language which is based on the surface structure alone, as traditional

grammar mostly was, could claim to approach the logical form of language even remotely. Any approach to the logical form must start by uncovering the deep structure which is often shrouded and hidden in the trappings of surface structure. Recent studies in deep structure have revealed the possibility (e.g. Lakoff, 1971, 1972) that the deepest structure of language may indeed be identical with the logical form. Whether or not this is eventually proved, it would certainly be wrong for us to rule it out a priori. The deep structure approach, in the form in which transformational grammar has presented it, represents a promising start to the discovery of the logical form of language. The Carnapian effort antedates the transformational grammatical approach and is, to that extent, an understandable historical product, but to persist with that approach in the face of a more positive approach towards natural language, which promises to achieve the philosopher's goal without a drastic resort to artificially constructed systems, would be tantamount to accepting the improbable just because the probable temporarily defies our understanding.

The philosophy of language based on transformational theory adopts a completely different approach to the philosophy of language from ideal language philosophy and ordinary language philosophy. This new approach does not totally negate the other two. It takes sides with ideal language philosophers insofar as it attempts to develop a theory of linguistic structure in the form of a formalized system. But in the transformationalist

framework the formalized theory is a theory of linguistic structure of natural language and not of an artificial one. Grammar is a formalized theory which provides a theoretical description of the speaker's intuitive knowledge of language. There is no place for the concept of intuitive knowledge in the ideal language philosopher's enterprise. In that sense ordinary language philosophy has great merit. But where it goes wrong is in its belief that the problem of the structure of language is totally resolvable in the study of its use.

3

Methodological Problems

In this section we will critically evaluate the possible objections against a methodological programme such as ours. Our attempt to draw support from scientific linguistics for philosophy of language may be objected to in two ways: a priori, on the ground that the nature of these two kinds of inquiry is so different that it is unlikely that philosophy may draw any benefit from linguistics (Ryle, 1953, 1961; Cavell, 1958, 1962), and a posteriori on the ground that such results as are now available from the applications of the principles of linguistics to the study of language, do not appear to help philosophical inquiry in any substantial way. We shall discuss both objections in detail.

From the a priori point of view there could be two types of possible objections.

1.1 Extrinsic vs. Intrinsic Interest in Language:

Linguists have claimed that they are interested in language for its own sake. They have disavowed the kinds of interest that philosophers, anthropologists, sociologists, psychologists, literary critics etc. have in language. We wish to show here that unlike all other disciplines claiming to have merely an extrinsic interest in language, the 'extrinsic' interest taken by philosophy becomes indistinguishable from a genuine intrinsic interest; thus each leads to the other and they seem to merge. While it may be true that no philosophy could stay confined to the task of resolving matters of linguistic usage without therefrom leading onto matters of philosophic["] interest, ~~it is also true that no linguist would now remain confined to~~ matters of description without leading on to questions of methodological and philosophical salience. This is the import of Chomsky's relabelling of linguistics as a branch of cognitive psychology, even though the full validity of this view still remains to be established. Indeed the intricacies and complexities of language have fascinated philosophers to the extent that they have started taking a deeply committed intrinsic interest in its study. Similarly we are aware of the analogous cases of some linguists who, starting from their study of languages, have slowly passed over to purely philosophical questions. Such individual cases, while they are not crucial to the thesis, do demonstrate the close affinity that exists between the two branches of inquiry.

2

As a footnote to this section, we may add that despite the rapid and revolutionary development in recent linguistics, it is as yet by no means established either that the linguistic ability is a unique cognitive ability, or that there indeed are language universals, or that unique neural structures exist which make language learning specific to the humans. Indeed, for these to be established, much more work will have to be carried out, not so much in linguistics as in the related areas of psychology and the neurosciences. Till then, the value of linguistic hypotheses may lie only in indicating the directions of research. These branches of knowledge may result finally in the confirmation or disconfirmation of linguistic theories. The value of linguistics for philosophy may lie not in its substantive notion such as that of innate universals etc. whose truth remains to be confirmed and at present much to be doubted, but in methodology it adopts, the process of explication and understanding of human intuitions which is central to it, and in the treatment of those concepts of philosophical relevance which have puzzled us for a long time (e.g. analyticity, contradiction, ambiguity, etc.) which this methodology has made possible.

1.2 First Order vs. Second Order Inquiry:

It is claimed that philosophy differs from all other branches of knowledge in that it is a second order inquiry, taking as its subject matter not the world but those branches of

knowledge which take the world as their subject matter. The same can be said in other ways, e.g., by insisting that philosophy is a conceptual inquiry, whereas other branches of knowledge are empirical ones. Let us see what makes philosophy a second order inquiry. It is the fact that it deals with concepts, whereas other disciplines deal with things or objects in the real world. Thus while specific disciplines may ask questions like whether or not the world is made up of atoms and molecules, whether or not language has phonemes and morphemes, whether or not the genetic codes determine the traits of human personality etc., philosophy is not directly concerned with the truth or otherwise of such statements describing the real world. ^{It} Philosophy seeks ^{to} ~~rather~~ to examine the concepts themselves and ask questions like: Are these concepts valid? What are the criteria for the validity of the concepts? Is conceptual validation relative or absolute? How far does language reflect valid conceptual structures? When does language fail? What constitutes knowledge? What are the limits of knowledge? And so on.

The received view is that linguistics falls among the empirical branches of knowledge and that, therefore, there cannot be any real contribution that it can make to philosophy. It is another empirical social science whose relevance to philosophy cannot exceed that of, say, psychology or sociology. What we want to suggest, however, is that linguistics occupies a somewhat unique position in this respect and that the distinction between first and second orders of inquiry does not hold in linguistics in the way it might do for other disciplines.

As a second order discipline, philosophy has to examine not only the concepts that the first order disciplines use but also the language in which the concepts are expressed, and the relationship between the concepts and their expressing language, for language may aid or misguide the inquirer. Philosophers, as we have seen, have often concluded that language misguides, that the correlations between the categories of thought and language are inexact, etc. This preoccupation with language shows the important role that language plays in philosophy as a second order discipline. Linguistics has the same concerns: How are thoughts expressed in language? How does the meaning structure correlate with the syntactic and phonological structures? Such preoccupations set linguistics apart from many other disciplines, and bring it closer to philosophy. Indeed linguistics should be said to have an advantage over philosophy in this field since linguistics is a scientific discipline, hence an objective and impartial study of the form and content relationship. Philosophy, with its preoccupation with concepts and conceptual relations, has tended to see the linguistic form as an obstruction at best and a distortion at worst. It is only recently that the philosopher's extrinsic interest in language has occasionally yielded place to intrinsic interest. Some philosophers may be reluctant to call such a study 'linguistics', and may prefer to call it 'philosophy of language' while turning linguistics into a first order discipline by definition.

It is this reflective nature of linguistics as a discipline, its two-level mode of inquiry, that makes it a claimant for the unique role now being claimed for it. At one level, linguistics is an empirical study - when it studies language as a psychological and a social means of communication. At this level it studies languages individually, puts them in families, notes their geneological relationships, describes their phonological, syntactical and contextual features, constructs, typologies, their dialectal and registral varieties, and correlates the use of language with psychological factors. At this level linguistics is an empirical study, subject to the usual verification procedures and cannot be expected to contribute much to philosophy as a conceptual inquiry except in a general way when new concepts are discovered. But there is yet another level at which linguistics operates - the level at which it sees language as a rule-governed system and seeks to establish the formal necessity holding between rules and the structures and meanings they generate. This aspect of linguistics i.e. theory of grammar, is very much like logic: as logic is concerned with the characterization of necessity or validity, linguistics is concerned with the explication of the notion 'correct sentence' (Itkonen, 1975a). At this level linguistics is no longer an empirical study - although it is the better being related to the empirical disciplines of socio- and psycho-linguistics. For these disciplines, to the extent they use the notion of rules of language in their pursuits, may

provide purely heuristic guidance to the enrichment of the content of those rules. We do not have to postulate, with Kant, a mental structure as a repository of these rules, or the universals in terms of which they are stated. Our purpose is served if we accept them as relations of formal necessity, which is sufficient to establish the validity of linguistic explanation as 'explications' of intuitively understood concepts relating to language. Grammar could thus be viewed as a second order inquiry, like philosophy.

We thus see that the a priori objections to our ~~view~~^{claim} programme lose their validity when we take into account recent development in philosophy and linguistics. The a posteriori objections, on the other hand are invalid because the kind of linguistics we have in mind is very recent and its findings, as applied to individual languages, still tentative. Yet even in this short period more philosophers have been attracted to linguistics than ever before.

Our attempt so far has been to show that philosophy and linguistics have several interests in common which make it possible for linguistics also to contribute to philosophy as much as philosophy contributes to linguistics. ~~Just as the~~^{As the} philosophical method of conceptual enquiry is part and parcel of linguistics and makes sure of the truth of linguistic rules, similarly the theory-building approach to the understanding of the mysteries of language may prove invaluable to philosophy in its attempt to unravel the linguistic tangle in which, in its

view, concepts are often caught and disfigured. We have tried to show that the intrinsic-extrinsic motivational difference and the first order-second order mode of inquiry do not quite succeed in establishing a difference between the two.

We shall now try to show that there are various positive connections between the two. Anyone going through a history of philosophy on the one hand, and linguistics on the other cannot escape noticing the common concerns and shared outlooks of philosophers and linguists. That both philosophers and linguists find themselves converging on issues which a strictly compartmentalist approach would treat as either mainly philosophical (or conceptual) or as mainly linguistic (or empirical) automatically accounts for the shared concerns and outlooks. Further, there is also the fact that whatever philosophers say about the nature of concepts, and linguists about the nature of language, has implications for the other. Both are eventually led to think about the nature of thought, about the structure and functioning of the mind, or whatever is proposed as a substitute for it. No wonder, cutting across the vertical distinction of methods, there are the horizontal distinctions of approach to the common subject matter. We have tried to show that while the vertical boundaries have not become hazy and indistinct, the horizontal distinctions, which unite the two disciplines vertically, have become more prominent. We suggest that there is more to be gained by concentrating on these horizontal divisions than by insisting on the increasingly

untenable vertical distinctions. For, if their goals are found to overlap, and if the approaches are often similar, we must look at what unites the two disciplines and not at what keeps them apart.

Among the shared concerns, the following ones have been the more prominent, with implications of considerable importance both for the philosopher and the linguist:

- (a) What is the nature of the linguistic symbol? Does it stand for things and objects in the real world, or for ideas?
i.e. the question of meaning.
- (b) What is the relationship between the linguist's symbol and its 'meaning'? Is it conventional (or arbitrary) or natural? If conventional, the relationship may be changed and new conventions can be established; if natural, man is bound by his language.
- (c) What is the relationship between language and thought?
Do the categories of thought determine, or are determined by the categories of language? Do the two reflect each other? Is thought language-independent?
- (d) Is language transparent or opaque? Are the categories of language the ones we see on the surface, or is there an underlying structure which appears with distortion on the surface? If so, are those philosophers who have based their analysis on surface features of languages wrong? Further, if there is a deeper reality in language, how do we discover

it and what reasons do we have to believe that there is such an underlying reality?

- (e) How is this underlying reality of language related to thought (meaning)?
- (f) Are there linguistic universals? If so, what is their nature?
- (g) What is the relationship between the underlying reality of language and these linguistic universals? Are they one and the same?
- (h) If there are such linguistic universals, what is their locus? The mind? Are we then to suppose that the mind has a certain structure and the phenomenal world is different from the noumenal world?
- (i) Is language a specifically human possession? Is it language that makes man different from and superior to other animals? If so, would it not be advisable to look in language for those properties that may tell us about the most fundamental characteristic of man, which is his mind?
- (j) Is 'mind' a mere speculation of the philosopher-psychologist or does it have a physical reality? Can the world be explained without requiring to postulate a non-accessible entity called 'mind'? Since language has been said to be so closely linked to the human mind, can language be explained without recourse to 'mind'? If it can, perhaps most other phenomena can be so explained too.

(k) Is the positivist conception of science the correct one?

For, if it is, 'mind' is ruled out. If it is not, what other conception of science is available to us? Is the hypothetico-deductive model the right one or do we need a hermeneutic approach?

(l) Which epistemology is the correct one — the empiricist one or the rationalistic one? Is linguistic knowledge derived from sense-experience, or from innate endowment? For, if linguistic knowledge is derived from sense-experience, so perhaps is most other knowledge, for language is source of the most abstract concepts. ✓

The list can perhaps be extended much further, but it is obvious from the foregoing that there is much in language that is of vital concern to philosophy. There are many questions above, ^{the} answers to which will perhaps be of great interest to one intrinsically motivated to study language. However, the truth remains that many philosophers whose interests, to start with, were extrinsic to language, have dealt with these questions in great depth not only because they were aware of the great implications they have for philosophy, but also because they thought the questions to be important enough in themselves.

Over the centuries, philosophies have crystallized two positions concerning the nature of knowledge — the empiricist position and the rationalist position — a distinction which has acquired deep significance in modern discussions about the nature of linguistic knowledge. In fact, most of the questions

listed above can be dealt with in ways which will fall either in the rationalist or the empiricist way of thinking. But in whatever way they are dealt with, they will be of deep significance to both the philosopher and the linguist.

For our present inquiry there is perhaps no need to go into the discussion concerning the problems of the empiricist or rationalist status of the theory of language. Our main concern is to show (i) why a theory of natural language is needed; (ii) what is the nature of such a theory, and (iii) how it will enrich philosophy of language. In order to carry out this programme we seek help from modern theoretical linguistics. In this way the present investigation calls for a dialogue between philosophy and linguistics. Therefore a separate discussion on empiricism and rationalism does not seem to be appropriate in the context of our investigation.

However, it may be desirable that we make our position clear on this issue, since the position for which we are arguing is not a variant of the well-entrenched Anglo-Saxon trends. We should recognize that our investigation, however noncommittal it may look, bears certain specific or distinct characteristics. In our view, the transformational generative theory of language leans more towards the rationalist than the empiricist position in the definition of the nature and function of language. This is clearly evident from Chomsky's own formulation. Chomsky argued that it is only within a rationalistic-axiomatic framework that an account can be given of the nature of language as

generation and production of infinite number of sentences. The creativity of language can be explained only if a rationalistically oriented philosophy of mind is presupposed. Chomsky, therefore, is of the opinion that the transformational conception of language has its roots in the philosophical and psychological tradition of the Cartesians.

In spite of his rationalistic bias, Chomsky has not been able to free himself from some of the deep-rooted positivistic presuppositions. His mistake is in the belief that scientific rationality constitutes the whole of rationality; that is why the major thrust of his inquiry has been to show how rationalism can be empirically defended. Thus his stand is coloured with the positivistic method. This needs a detailed argument which will be presented in the final chapter. Chomsky's stand on rationalism can in fact be characterized in the same way as Habermas characterized Popper's thought: "a positivistically bisected rationalism". A consistent rationalism is not possible, if one does not seriously take into account the question of the possibility of science and the condition for its validity. This question leads one to Kant's transcendental logic (which relates formal logic and grammar with the structure of experienced reality) about which Chomsky has nothing to say.

According to Chomsky, the behaviouristic psychology of language, which for him is necessarily associated with the taxonomic science of language, uses a model which lacks theoretical power because it fails to see language in its

totality. The taxonomic science of language built its model in terms of certain empirical criteria. In fact, the recent debate which Chomsky (1969a, 1969b, 1976:179-204) had with Quine (1969a, 1969b, 1972) on this issue shows a deep methodological crisis in the philosophy of language. As a result, it is in a state of challenge and crisis. Indeed, this crisis suggests the need for a change in the philosophy of language.

CHAPTER 2

LINGUISTIC CONSTRUCTIONISM AND IDEAL LANGUAGE THEORY

The basic tenet of modern philosophy of language is that philosophical problems are problems of language. Thus in its method, it suggests a linguistic approach to the understanding of logical form and philosophical problems in general. This may be identified with the method of seeking clarification where 'clarification' is understood in terms of giving a linguistic solution to a problem. With regard to the question of clarification, there are two approaches, viz., the ideal language approach and the ordinary language approach to philosophy. Though both methods seek clarification, the complete difference in their method of approach has resulted in two different conceptions in the philosophy of language. The difference between them as Bergmann (1964:177) has pointed out is on the question of which language is 'suitable' to talk about the world. It is this consideration of the notion of a suitable language that leads ideal language philosophers to think that clarification could be best sought through the construction of an artificial language, and ordinary language philosophers to think that clarification could be sought only by describing the complex pattern of the logical behaviour exhibited in the concepts of daily parlance or ordinary

discourse or everyday language.

The present discussion deals with the ideal language philosophers' approach to language. These philosophers start with the assumption that natural languages are misleading and ill-adapted to expressing many philosophical matters. It has been pointed out, for example in the Frege-Russell thesis, that the grammatical form of ordinary language hides the logical form of the proposition. Thus any formulation of philosophical questions made in the idiom of natural language must lead to a hopeless confusion. This made the ideal language philosophers concentrate solely on the structural or the formal aspect of language which led to the view that a more suitable vehicle for philosophical reasoning would be a formalized artificial language built after the pattern of the logico-mathematical model. In other words, the ideal language programme consists in the construction of a formal system in which the concepts relating to the subject matter are introduced by means of axioms and definitions. The important feature of a constructed system is that it formalises concepts which are already in use in unsystematic ways. This is what Carnap, for example, tried to do with the concept of probability and with the concept of confirmation, and it might also be said to be what Tarski did with the concept of truth. So linguistic inquiry in a formal system means a kind of reconstructionism, or what Carnap calls the method of explication. The purpose of the method of

explication is to replace the inexact and vague concepts of ordinary discourse (explicandum) by the exact and precise concepts of science (explicatum)¹. The whole system of elementary logic is a reconstruction of such a type in which the set of concepts expressing the logical constants of daily use are reconstructed through an elaborate method of axiomatization.

Clearly the method of ideal language philosophy involves taking a certain view of language and of meaning. The ideal language philosophers, as opposed to the ordinary language philosophers, correctly saw the importance of structure in the analysis of meaning and they sought to demonstrate how the grammatical form of natural language conceals the logical form of the propositions. What they seek to develop is a theory of linguistic structure that takes the form of a formalized system. But it is important to note that, for the ideal language philosophers, such a formalized theory is a theory of linguistic structure of artificial language and not of natural language.

In our discussion we will be mainly concerned with the theory of language as developed by the ideal language

1. 'In the course of constructing our symbolic language systems, it frequently happens that a new precisely-defined concept is introduced in place of one which is familiar but insufficiently precise. Such a new concept is called an explicatum of the old one, and its introduction an explication' (Carnap, 1958:2, see also, 1962:3ff).

philosophers. The ideal language philosophers, we maintain, are correct in viewing the purpose of philosophical analysis as that of the explication of the logical form or the structure of language. But we will argue that the ideal language philosophers' whole programme rests on an erroneous assumption which involves an extremely narrow and partial view of language. The basic contention of ideal language philosophy viz. that natural languages are essentially amorphous, can be questioned on a very fundamental ground. The central point which we will emphasize is that the amorphousness is not an intrinsic property of language. It is, as Jerrold J. Katz (1971:182) comments, "an artefact of the way that linguistic structure has been traditionally represented". We will argue, following Chomsky, that a natural language presupposes a rule governed structure whose complexity can be represented in a richer grammatical theory which postulates an underlying (or deep) structure of language on the basis of hypothetical postulations of unobservable syntactic relations. Thus within the framework of a comprehensive and integrated grammatical theory it is possible to explain a large number of facts about grammatical relations, syntactic ambiguity, sentence-type relations, well-formedness etc., which are not reflected in the surface structure of sentences.

The ideal language philosopher's attempt to improve natural language or to replace it by an artificial language is

bound to fail since it does not take into account the detailed and 'entangled geography' of ordinary concepts. In order to bring out the logically important features of natural language, the ideal language philosophers reduce the many idioms of natural language to the few of their artificial language. This has obscured many important features of natural language. This is what has happened for instance in quantification theory, whereby lumping the quantifier particles 'each', 'every', 'all' and 'any' and by treating them as stylistic variants of the same logical structure, ideal language philosophy has obscured many of the important linguistic issues concerning types of reference, existential import and the law-like form of the general proposition (see, Vendler, 1967).

The method of ideal language philosophy involves a counter-intuitive treatment of linguistic facts. This is, for example, evident from Russell's theory of descriptions which does at certain points involve counter-intuitive results and does not consistently reproduce our ordinary way of interpreting sentences. This we will see in connection with our discussion on Russell's theory of descriptions.

We will divide this chapter into four consecutive sections. The first section will be concerned with the nature of the ideal language system. The second section will be concerned with the philosophical foundations or presuppositions of the ideal language approach. The third section will be

concerned with specific theory of language as developed in the constructionist framework. In that connection we will examine Carnap's metatheory of language. The final section will be devoted to the critical evaluation of the ideal language programme.

1

1. The Nature of Ideal Language System

Any discussion on artificial language must start with a basic presupposition that there is a prima facie distinction between natural language and artificial language. Though the notion of artificial language has been of special importance in twentieth century philosophy, its need had been felt since antiquity. The attempts of scholastic logicians in this direction deserve special mentioning. The logicians of the scholastic tradition tried to formalize the usage of language with the purpose of developing a method that would distinguish the formally valid from the formally invalid inference schemes of argumentation (see, e.g. Moody, 1953).

The distinction between the two systems is basically a distinction between languages ordinarily called natural languages like English, Bengali and so on, and the artificial language, that is, the various formal systems constructed by philosophers for special purposes. The conception of an artificial language, as framed in the contemporary philosophy

and logic should not be confused with languages like Esperanto which is an invented language intended to be a full-blown substitute for natural languages. ^{An}artificially constructed language as used in a philosophical sense is also described as formal or ideal language.

In this connection we wish to point out that all formal languages are not ideal languages as they are understood in the philosophy of language. As a matter of fact, we distinguish between two conceptions of formally reconstructed artificial language. The first one is concerned with the formalization of a particular scientific theory which has existed before in an unformalized version. Such formalization is never aimed at the whole of science or everything factual or cognitive. In this conception of formalization, the vocabulary includes not only the logical terms but also certain descriptive or theoretical terms whose logic and semantics are formalized along with the theory which is stated in terms of them. There are artificial languages for cell theory (Woodger), learning theory (Hull and others), quantum theory (Reichenbach and von Neumann) and classical mechanics (Suppes and others). The purpose and significance of such artificial language systems do not involve anything more than a desire to clarify and systematize whatever theory is in question. These languages can thus be said to have functional significance.

The second conception of formal language has essentially arisen from a philosophical motivation. This second conception of formal language characterizes it as an ideal language which in principle can express any proposition, any fact or anything cognitively meaningful.

The motivation behind the philosophers' construction of an ideal or artificial language is, as we know, their complaint that natural languages are fuzzy, vague, imprecise, or downright illogical. They are therefore unsuitable for undertaking meaningful philosophical discussion. Ordinary language, according to them, is defective mainly in two ways: first, its vocabulary is often vague and imprecise. Philosophical confusion over the problems of substance, universals etc. can often be traced to the peculiarities of natural locutions. Secondly, the combination of symbols that it allows is, on many occasions, found to be ambiguous and it is this syntactical feature which accounts for many of its philosophical failings. What is needed then is the construction of a logically perfect language with precise semantical and logical rules that will replace natural vocabularies by precise symbols and avoid meaningless combinations of symbols by employing precise rules for combination. "Ordinary language" as Russell (1940:415) says, "is not sufficiently logical....we must first construct an artificial language before we can investigate our problem". Thus an artificial language can be so

designed that it is possible to avoid paradox and inconsistency, e.g. the liar paradox, which allegedly arise in any natural language.¹ It is in this second sense^{that} we use the term ideal language and it is this conception which will be our chief concern in this discussion.

From the above discussion it follows that the ideal language philosophers propose a logically perfect language into which sentences of a natural language can be translated if they are either nonphilosophical sentences about matters of fact, or represent mathematical truth, or are philosophical sentences whose translation reveals their true linguistic character (see, Bergmann, 1960:43). In this framework all other unreconstructible sentences are labelled meaningless pieces of metaphysics. It is in this sense that ideal language philosophy provided a complete critique of traditional metaphysics. It provided the analytical tool by which metaphysical statements could be dismissed on logico-linguistic grounds. With the help of its principle of sentence formation and semantic interpretation, it excludes metaphysical statements as

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1. See Tarski's observations on the notion of semantic closure and on the consistency of natural language. After deriving the Liar paradox in his paper, 'The Concept of Truth in Formalized Languages' (1966), Tarski shows that natural languages do not contain necessary requisites to bar the derivation. Natural languages, he shows, are 'semantically closed' in the sense that they contain within themselves not only sentences but the names of the sentences, 'Snow is white', for example, is the name of the sentence 'Snow is white'. Thus, in his opinion, semantic paradoxes cannot be resolved in a language which is semantically closed. From this he concludes that a formally adequate definition of 'true' in natural language is not possible.

violations of proper linguistic relations. It should be mentioned in this connection that this anti-metaphysical motivation is not the only one that induces the ideal language philosophers to develop a logically perfect language.¹ Carnap, Tarski, Godel, Bar-Hillel and others tried also to provide a syntactic analysis of the concepts of formal deductive logic, such as provability, derivability from premises, etc.²

The development of what we shall call, indifferently, formal or ideal language is closely related to the recent studies made in the foundations of logic and mathematics. In fact it has its roots in the work of Frege, Russell and Whitehead, Hilbert, Carnap, and Tarski. It flourishes today in the work of, for example, Montague, Hintikka, Scott, Kaplan, Kripke, and van Fraassen. The distinctive character of this approach is its reliance on the notions and techniques of mathematical or symbolic logic. The ideal language approach cannot be understood without some knowledge of the formal or logistic

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1. The elimination of metaphysics through the construction of an ideal language was the sole preoccupation of the Vienna School to which Carnap also belonged. Such motivation was absent in the Polish School approach. Lukasiewicz wrote, 'I have strong and unyielding objections to the way in which Carnap attempts to reduce objective questions to linguistic ones....Carnap's attempts to reduce objective questions to consideration of this matter I regard as hazardous philosophical speculation'. (Quoted from Skolimowski, 1967:73-74).
 2. An extension of this approach is found in the recent development of the model theory. A model is a kind of interpretation for the syntax of a formal language and one could speak of sentences of a language being true or false relative to a model. Semantic concepts such as 'validity' and 'logical consequence' may be defined in terms of truth 'in' a model (see, e.g. Addison, Tarski and Henkin, 1965).

system as developed in contemporary logico-mathematical studies. This will provide the necessary background information for our exploration of the ideal language approach. In fact any discussion on the philosophical foundations of the ideal language approach will be incomplete if we do not go into the development of logic as an axiomatic-deductive system.

The main aim of a logician in constructing a logical system is normative rather than descriptive. A logician is not so much interested in how people actually organize their thought, but rather in the question of how they ought to do so if they are to avoid fallacious arguments arising from the ambiguity and structural confusion of natural language. Logicians therefore see the need for abandoning ordinary language in favour of an artificial mathematical notation or calculus. The development of the logical calculus has a long history. But in modern times it has been developed mainly by Peano, Frege, Russell and Whitehead.

Leibnitz anticipated the modern logician by bringing logic and mathematics together. His work contains the very basis of the logistic conception. In fact most of the logistic philosophers are not only sympathetic to Leibnitz, they also inherit the characteristic atomism of his system. Max Black (1965:16), for example, is of the opinion that the axioms of reducibility is a generalization of the Leibnitzian principle of the identity of indiscernibles. Leibnitz tried to bring

logic and mathematics together in terms of his two well-known theses. The first is concerned with the difference between truths of reason and truths of fact and their mutually exclusive and jointly exhaustive character. The second is concerned with the introduction of calculation into logic, that is, the methodological idea of using mechanical calculation in aid of deductive reasoning. For Leibnitz, then, truths of reason are grounded in the principle of contradiction which covers the principle of identity and of the excluded middle. In the Leibnitzian formulation not only trivial tautologies but all the axioms, postulates, definitions and theorems are taken as truths of reason; that is, they are identical propositions the opposites of which involve contradictions. Mathematical propositions in this sense are logical propositions. They are neither true of particular eternal objects nor of idealized objects. They are true because their denial would lead to logical impossibility.

The Leibnitzian thesis thus provides the basis of the contemporary attempt to develop mathematics as an axiomatic deductive system. The validity of mathematics rests neither on its self-evident character nor on any empirical basis, but derives from the stipulations which determine the meaning of mathematical concepts. The propositions of mathematics are thus 'true by definition'. This means that mathematics starts not only from a set of explicit definitions but also

from a set of propositions which are not derivable within the theory. They are characterized as the postulates or the axioms of the theory (see, Tarski, 1941) and are formulated in terms of a set of basic or primitive, i.e. undefined, concepts and the rules of transformation laid down.

Once the primitive terms and postulates are specified, the entire theory is completely determined. That is, it is derivable from its postulational basis; for example, every term of the theory is definable in terms of the primitives and every proposition of the theory is logically deducible from the postulates. Such a deductive-axiomatic approach received its classical embodiment in the Frege-Russell thesis which sought to show that all arithmetical notions are definable in terms of purely logical ideas. The axioms of arithmetic are deducible from a set of a few basic propositions which could be regarded as logical truths. Here we need a separate discussion on Frege, since Frege's contribution to the development of formal language is, as Kneale (1962:435), puts it, "the greatest single achievement in the history of the subject". Without going into the many sided features of Frege's system we will only briefly state how Frege has formalized the traditional theory of inference.

Frege formalized the theory of inference in such a way that it became not only more rigorous but at the same time more general in its application than the traditional syllogistic

system. In order to do so he invented an elaborate symbolic system or what he called 'concept-script' (Begriffsschrift) to formalize ordinary language on the model of the language of arithmetic.

One of the major features of Frege's system is that it differs from traditional logic in that it rejects the subject-predicate distinction of ordinary grammar. The subject of the proposition, say, 'Caesar conquered Gaul' is not the same as the subject of the proposition 'Gaul was conquered by Caesar', but, despite the difference, whatever inference is drawn from the first proposition can also be drawn from the second one. Hence the difference between them is irrelevant to the theory of inference. What Frege did was to replace the subject-predicate distinction by the familiar distinction borrowed from mathematics, namely, the distinction between function and argument. Frege applied the notion of function to expressions in ordinary language. He later introduced 'quantifiers' in order to handle the universal and existential propositions. By adding quantifiers to propositional calculus Frege succeeded in developing a complete system of logic.

The logistic movement found its culmination in the Principia Mathematica. Its influence was so overwhelming that a large number of philosophers developed their artificial language on the model of this work. Principia Mathematica provides the entire system of formal logic whose formulae are

combined and transformed in accordance with explicitly stated rules of operation.

In the above we have given a brief exposition of the formal basis of the ideal language approach as understood in the history of the development of logic as an axiomatic-deductive system. We will now discuss that the philosophers' programme of constructing the theory of the ideal language is associated with two not clearly differentiated conceptions about the nature of such a constructed linguistic system.

According to the first conception, the purpose of ideal language is to supply the logical structure which natural languages lack. On this conception, philosophical analysis might start as a first step by considering the facts of natural language, but all further steps must go beyond such facts, and focus on the stipulation of principles to govern the philosophically acceptable use of the term or sentence within the framework of a constructed ideal language. What is claimed here is that ideal language also has a descriptive basis. Though Carnap, for example, considers artificial language as a theory about the structure of a natural language in the form of an idealization, yet sometimes he too seems to emphasize its descriptive basis. This is evident from his following observation:

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We now proceed to restrict our attention to a special aspect of the facts concerning the language B which we have found by observations of the speaking activities within the groups who speak that language. We study the relations between the expressions of B and their designation. On the basis of these facts we are going to lay down a system of rules establishing those relations. We call them semantical rules (Carnap, 1964:422).

It is important to note that the semantical rules which are laid down in connection with a given natural language are not rules of that language but rules of another language, an artificial language "constructed by us". R.M. Martin, while indicating certain requisites for a "clear minded philosophy" says:

Because of the presence of the logical as well as of the semantical or epistemological antinomies, it seems very likely that natural language, even just its declarative, cognitive part, is inconsistent. To talk about natural language L with the kind of care and precision necessary for clear minded philosophy, without indicating how one would give an explicit, consistent formalization of it, is to forget the very first lessons which Frege, Carnap and Tarski taught us (Martin, 1952:44).

Kemeny takes a similar position when he says:

Philosophers must face up to the fact that there are certain important problems that cannot be discussed except in terms of a language free of vagueness and ambiguity, and with a clearly understood structure (Kemeny, 1963:62).

And further

It would appear to me that philosophical studies constructed in terms of incompletely understood languages must eventually lead to chaos (Kemeny, 1963:75).

Thus Kemeny is quite explicit on the point that artificial language must legislate over natural language, i.e., it must provide the proper linguistic conventions:

It is precisely in the cases of ambiguity or vagueness that the philosopher must be given the freedom to legislate (Kemeny, 1963:75).

Robert Rogers, while talking about the clarity and precision of artificial languages, as opposed to vagueness and imprecision of natural language, still maintains the essentially descriptive nature of artificial language.

There is about them, and results based upon the use of them, a kind of definiteness which it is impossible to obtain when one is working with an ordinary language. And because, though formalized, such languages have much in common with ordinary languages, and can be made successively to approximate such languages in power of expressions; semantic analyses carried out with respect to formalized languages are of interest not only to students of such languages, but also to those who are especially interested in the semantics of ordinary, unformalized languages (Rogers, 1963:18).

On the second conception, the ideal artificial language is conceived as a theory about the structure of natural language in the form of an idealization. As Carnap writes:

In consequence of the unsystematic and logically imperfect structure of the natural word-languages (such as German or Latin), the statement of their formal rules of formation and transformation would be so complicated that it would hardly be feasible in practice. And the same difficulty would arise in the case of the artificial word-languages (such as Esperanto); for, even though they avoid certain logical imperfections which characterize the natural word-languages, they must, of necessity, be still very complicated from the logical point of view owing to the fact that they are conversational languages, and hence still dependent upon the natural languages (Carnap, 1937:2).

Carnap makes the further claim that ideal languages are relevant to natural language because they are the 'ideals' of language. They are relevant in the same way as the ideal theories are in sciences.

The method of syntax which will be developed in the following pages will not only prove useful in the logical analysis of scientific theories — it will also help in the logical analysis of the word-languages. Although here, for reasons indicated above, we shall be dealing with symbolic languages, the syntactical concepts and rules — not in detail but in their general character — may also be applied to the analysis of the incredibly complicated word-languages. The direct analysis of these, which has been prevalent hitherto, must inevitably fail, just as a physicist would be frustrated were he from the outset to attempt to relate his laws to natural things — trees, stones, and so on. In the first place, the physicist relates his laws to the simplest of constructed forms; to a thin straight lever, to a simple pendulum, to punctiform masses, etc. Then, with the help of the laws relating to these constructed forms, he is later in a position to analyze into suitable elements the complicated behaviour of real bodies, and thus to control them... . In the same way, the syntactical property of a particular word-language, such as English, or of particular classes of word-languages, or of a particular sub-language of a word-language, is best represented and investigated by comparison with a constructed language which serves as a system of reference (Carnap, 1937:8).

What Carnap's proposal suggests is that ideal language should be taken as an idealization of a natural language in the same way in which ideal gases, complete vacuums, are idealizations of physical phenomena. Alonzo Church speaks of ideal languages as norms to which any natural language is an empirical approximation.

Let us take it as our purpose to provide an abstract theory of the actual use of language for human communication — not a factual or historical report of what has been observed to take place, but a norm to which we may regard everyday linguistic behaviour as an imprecise approximation, in the same way that, e.g., elementary (applied) geometry is a norm to which we may regard as imprecise approximations the practical activity of the land-surveyor in laying out a plot of ground or of the construction foreman in seeing that building plans are followed. We must demand of such a theory that it have a place for all observably informative kinds of communication — including such notoriously troublesome cases as belief statements, modal statements, ... or at least that it provides a (theoretically workable) substitute for them (Church, 1951:100-101).

Bar-Hillel, while attacking Moore's ordinary language approach to philosophical problems argues in the same way as Carnap did, that ideals are just as important to the analysis of language as they are in the sciences.

Moore's method of approaching these tasks is just as Sisyphean as a physicist's who should start to 'analyse' the facts of free fall, without constructing or imagining artificial ('ideal') conditions (vacuum, etc.) in the manner of Galilei (Bar-Hillel, 1946:339).

2

Russell's Approach and the Philosophical Foundations of Ideal Language Theory

In the above we have tried to clarify some of the general questions concerning the nature of the ideal language systems. Though these questions undoubtedly represent some of the important aspects of the philosophical foundation of

ideal language philosophy, they nevertheless constitute only one aspect of the whole issue. In order to complete the discussion it is necessary to address ourselves to some of the methodological questions pertaining to the foundations of the ideal language theory. We will therefore first go into the question of philosophical and methodological justification for the construction of such^a theory. Among the philosophers and logicians, Russell is the one who provided an elaborate argument for it and hence we will discuss the issue in the light of Russell's methodological programme for ideal language philosophy.

The aim of philosophy, as Russell defines, is to search for the skeletal forms of different types of propositions and to discover the systematic relations of dependence between those different types. Russell's approach to this philosophy of language starts with the fundamental presupposition that beneath the various grammars of natural languages there lies a standard or canonical form. This form (what is known as logical form) is to be discovered in order to have a clear understanding about ordinary language claims. It needs to be mentioned that the linguistic enterprise of Russell, unlike that of the Oxford school, does not end with the clarification of language only. Russell perceived that it was through the analysis of language that one could discern the basic structure of the reality that language was about.

The notion of structure is fundamental to Russell's conception of linguistic analysis as a philosophical method.¹ It was primarily through his investigations into logic and the foundations of mathematics that Russell first developed an interest in the formal or structural aspect of language. The logic which he developed in Principia Mathematica provided him the foundation on which he built his philosophical method. One of the most significant contributions of Russell from our point of view was the application of his discoveries in formal logic to the analysis of propositions that we assert in our ordinary knowledge claims, our ordinary speech about the world. Attempts have been made to show the connection between the logic developed in Principia Mathematica and his philosophical theories, particularly logical atomism. Urmson (1956:6) for example, maintained that through his work in formal logic Russell was led to think that the method and technique employed in his logico-mathematical investigation to reduce mathematics to a few logical premises can equally fruitfully be applied to ordinary language in order to reduce it to its fundamental propositions and to the basic constituents of these propositions.

1. Russell remarked, "It has seemed to me that those who are not familiar with mathematical logic find great difficulty in understanding what is meant by structure, and owing to this difficulty are apt to go astray in attempting to understand the empirical world" (Russell, 1959:100).

So Russell qua logician-mathematician is interested in formal structure or 'logical syntax' for its own sake but, qua philosopher, he is interested in it for another reason. Operating within the framework of the reference theory of meaning, Russell defined the meaning of an expression as an entity of some kind which the expression designates. Accordingly, meaning analysis for him is essentially concerned with the examination of various kinds of entities language is about. Words are meaningful because they stand for something else. So for a symbol to have genuine meaning it must denote some entity. From this what follows is that there must exist a correspondence between the words (non-syncategorematic) in a proposition and elements in the facts asserted by the proposition. In such a relation of correspondence, the proposition and the fact asserted have a common structure. In other words, they share the same logical form. It is this logical form or common structure which is the main object of Russell's philosophical interest.

Russell found that since the propositions of ordinary language do not reveal their logical form, a method must be adopted by which the logical form of the ordinary language could be revealed. On the basis of his logical theory Russell proposed that only through analyzing and recasting the propositions of ordinary language was it possible to eliminate the vagueness that exists in non-referential expressions of language. This method, which is known as reconstructionism,

was initiated first by Russell and was later adopted by a large number of formalists. Russell believed that reconstructionism, if carried out systematically would result in a logically perfect language, a language that would "show at a glance the logical structure of the facts asserted or denied" (Russell, 1956:198). Our aim here is to show the nature and function of reconstructionism. For this we will concentrate mostly on early Russell — the philosophic phase which culminates in the philosophy of logical atomism. It was here that Russell developed his method of reconstructionism and made extensive use of it.

Russell has introduced the notion of logical form in two different but related senses. In its first sense logical form is understood in a purely formalistic manner; in its other sense it has more than a purely formal significance. We will now elaborate the two senses of logical form.

Since Russell's involvement with linguistic analysis basically arose through his investigations in logic and foundations of mathematics, his approach to the question of logical form is formalistic, i.e. he gives sole emphasis to the structural or syntactic features of language. This led him to think that the analysis of propositions should be made on the basis of a general schema underlying the particular content of a proposition, so that it could be shown that propositions expressing different subject matters could still have identical form. Different propositions such as 'Socrates is mortal',

'Jones is angry', 'The Sun is hot', etc., in spite of their differences, represent something common, "something indicated by the word 'is'" (Russell, 1960:40). It is this common feature which Russell calls 'forms' and it is in this sense that they are "the proper object of philosophical logic" (Russell, 1960:41). It is in this sense also that the different propositions are said to have a common form, since the word 'is' is the 'is' of predication and expresses a kind of relationship existing between the object and the property ascribed to it. These propositions presuppose a common logical schema or a logical form $P(s)$.

Even in this purely formalistic sense, logical form, as Russell conceived it, has a wider significance. That is to say, he tried the application of this abstract logical form to test the validity of certain philosophical theories. For example, in his study of Leibnitz, Russell shows how the entire metaphysical system of Leibnitz is basically rooted in an erroneous assumption regarding the forms of propositions. In fact, all metaphysical systems have resulted from certain preconceived notions about the forms of propositions. Regarding the failure of Leibnitz, Russell observes:

I found — what books on Leibnitz failed to make clear — that his metaphysics was explicitly based upon the doctrine that every proposition attributed a predicate to a subject and (what seemed to him almost the same thing) that every fact consists of a substance having a property. I found that this same doctrine underlies the system of Spinoza, Hegel and Bradley, who in fact all developed the doctrine with more logical rigour than is shown by Leibnitz (Russell, 1959:61).

All these grand metaphysical systems are thus founded on an untenable assumption about the form of a proposition. The solution to this, Russell says, is to be found "by greater care and accuracy" (1956:324). Our whole understanding of logical form has to be changed and this can be achieved only through a careful and painstaking analysis of linguistic form. Such analysis will help us to see that to regard all linguistic forms as reducible to the subject-predicate form is a gross misrepresentation of actual linguistic form. Many propositions, for example, are relational and to try to interpret them as something else will be a linguistic distortion, e.g. the proposition, "This thing is bigger than that", Russell explains:

If we say 'this thing is bigger than that', we are not assigning a mere quality of 'this' but a relation of 'this' and 'that'. We might express the same fact by saying that 'that thing is smaller than this', where grammatically the subject is changed. Thus propositions stating that two things have a certain relation have a different form from subject-predicate propositions, and the failure to perceive this difference or to allow for it has been the source of many errors in traditional metaphysics (Russell, 1960:4).

In order to avoid this, Russell argued that philosophical analysis should be directed towards determining as precisely as possible the true logical form of the proposition. The failure of this otherwise would lead to a metaphysical theory which distorts the true nature of reality. This has been clearly expressed in his article Logical Atomism where he says:

The influence of language on philosophy has, I believe, been profound and almost unrecognized. If we are not to be misled by the influence, it is necessary to become conscious of it, and ask ourselves deliberately how far it is legitimate. The subject-predicate logic, with the substance-attribute metaphysic, are a case in point.... We must be on our guard....if our logic is not to lead to a false metaphysics (Russell, 1956:330-331).

What the above discussion suggests is that, for Russell, analysis of linguistic forms is not a mere formal exercise whose aim is to exhibit only the features of logical syntax. Russell believes that a proper analysis of linguistic form would give us knowledge of the structure of reality and the propositions corresponding to it.

Russell's treatment of logical form, however, is basically concerned with the syntactical features of propositions. That is why Russell is concerned with those features which represent the way in which the constituents of a proposition are related. It is this sense of logical form to which Russell refers when he says:

In every proposition there is, beside the particular subject matter concerned, a certain form, a way in which the constituents of the proposition...are put together (Russell, 1956:331).

In other words, the primary involvement of logical form is with syntax and not with vocabulary.

We started our discussion of logical form with a preliminary distinction between the narrow and extended senses of logical form. We have so far discussed only the narrow or the formal sense of logical form. But as he became increasingly

aware that an investigation of syntax alone is not sufficient, Russell himself made use of logical form in its extended sense also. In its extended sense the investigation of logical form involves an examination of the constituents.

The relevance of this whole question can best be understood in the context of Russell's thesis concerning the isomorphic relationship between proposition and fact. According to ^{him,} facts cannot only be said to have a form but precisely the same form as the propositions which assert them. As he said:

Two facts are said to have the same form when they differ only as regards their constituents. In this case, we may suppose the one to result from the other by substitution of different constituents. For example, 'Napoleon hates Wellington' results from 'Socrates loves Plato' by substituting Napoleon for Socrates, Wellington for Plato, and hates for loves. It is obvious that some, but not all, facts can be thus derived from 'Socrates loves Plato'. Thus some facts have the same form as this and some have not. We can represent the form of a fact by the use of the variables, thus 'xRy' may be used to represent the form of the fact that 'Socrates loves Plato' (Russell, 1956:286).

Since there is isomorphism between propositions and facts, the proposition is said to 'mirror' the fact. This means that one could discover the form of the fact by discovering the form of the proposition in which that fact is reflected.

Thus in order to discover the true form of a fact, one should be able to determine the form of the proposition corresponding to it. This made Russell aware of the problem that investigation of syntax alone could not serve the purpose. For this one needs to examine the true constituents of the

proposition. Russell's theory of descriptions is a case in point. Its methodological significance is that it is an attempt to solve a philosophical problem in the framework of ideal language theory.

The problem that the theory of descriptions addresses itself to is that there are intelligible noun phrases, such as 'the present King of France' which, though standing in a subject position in a sentence as substantial phrase, yet may stand for nothing at all. However this does not prevent us from having a meaningful discourse about phrases whose subjects do not exist. In other words, we have no difficulty in understanding propositions whose subject terms refer to non-existent things. This led philosophers including the early Russell to develop a somewhat naive conception of the relation between signs or words and what they stood for. In case of substantival or noun phrases which stood for non-existent things they were said to stand for subsistent things. This is what Russell later found gratuitous and offensive to our "feeling for reality".

Russell traced this view to the mistaken notion that descriptions function logically as names. If descriptions are treated as names then we cannot do justice to those cases which do not satisfy the uniqueness condition. In such cases the sentence in which the description occurs would be about nothing at all, and thus would be regarded as meaningless. But it is found that in many cases such sentences are not only

meaningful but true. How then does one account for this meaningfulness? With regard to this there are two alternatives: we can either say that descriptive phrases function referentially on the basis of a postulated entity to which the description applies, or we can interpret those phrases in such a way that the problem of the denotata of vacuous descriptions does not arise. Meinong and Frege (of course in their own different ways) adopt the first alternative, Russell accepts the second one. Russell's analysis of descriptions involves two fundamental steps. His first step involves showing how descriptions and names have logically distinct functions to perform and the second step involves reconstructing description-propositions in such a way that their logical form stands clearly revealed.

Now the question is if descriptions are not regarded as names, then what are the propositions in which they occur? Russell points out that the problem with this view is that it presupposes more than is warranted about the logical forms of propositions containing descriptive phrases. What it presupposes is that since a description-sentence could assume the subject-predicate form, it is an assertion about some entity designated by the subject term. But that such a contention is false will be proved only when it is possible to unmask the misleading grammatical form of those propositions. This will enable us to reveal how the real forms of those

sentences are different from the subject-predicate form. These sentences, if properly analyzed, would be found to be not singular propositions but genuine existential propositions which are about property or properties possessed by some unique individual.

The analysis of such propositions is effected through a translation procedure according to which the original proposition is translated into that set of statements which are implied by the original proposition. To cite Russell's well-known example again: 'The author of Waverley was Scott', there are three statements which the sentence implies:

1. At least one person wrote Waverley;
2. At most one person wrote Waverley;
3. Whoever wrote Waverley was Scott.

What Russell showed is that the descriptions can be altogether eliminated since description-propositions are not about their (supposed) referents. They do not have any referential function. In other words, they are what Russell calls, 'incomplete symbols'. They are defined only contextually. On the other hand, the expressions which denote genuine objects do not need to be defined contextually. They have meaning in isolation and are kept intact in the reconstructed version also. At this point Russell's theory of descriptions involves, apart from logical, ontological significance too. What the clarification of logical form of description-proposition shows

is that there is an isomorphism between facts and propositions, i.e. those which are genuine constituents will remain so in the reconstructed proposition.

The reconstructionist programme, if pursued systematically for the explication of logical form, would theoretically culminate in an ideal, a logically perfect language in which "there will always be a certain fundamental identity of structure between a fact and the symbol for it..." (Russell, 1956:197). By a fundamental identity of structure is meant that

In a logically perfect language, there will be one word and no more for every simple object, and any thing that is not simple will be expressed by a combination of words, by a combination derived, of course, from the words for the simple things that enter in, one word for each simple component. A language of that sort will be completely analytic, and will show at a glance the logical structure of the facts asserted or denied (Russell, 1956:197-198).

Russell believed that ordinary language cannot achieve this, since it is inherently incapable of showing "at a glance the logical structure of the facts asserted or denied".

In a logically perfect language what is sought is the logical form of the basic propositions which constitute the basis of the whole linguistic superstructure. These basic propositions are called atomic propositions and each asserts a fact which is known as an atomic fact. Since atomic propositions account for atomic facts they are regarded as foundational elements of language.

Isomorphism between the logical structure of a sentence with the ontological structures of facts leads Russell to a metaphysical inquiry. In other words, Russell's linguistic programme commits him to a definite metaphysical position. However, we cannot go into examining the validity of Russell's analysis here, because, our main purpose was to show the philosophical foundation of ideal language philosophy and the discussion of Russell's method of reconstructionism was intended to highlight this basic concern.

Russell's theory of descriptions, which is a result of the application of his method of reconstructionism, meant to be a systematization of ordinary usage. But following Strawson we will show that Russell's analysis does not consistently reproduce our ordinary way of interpreting sentences. In fact it involves counter-intuitive analysis of linguistic fact.

The mistake which formalists like Russell and others¹ made was to look upon language in abstraction from the real life situations in which it works and this hypostatization

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1. Similar to Russell, Quine argues that in natural language there are what he calls truth value gaps, which are not found in ideal language. In natural language if the object which the singular description purports to describe - as in the case of 'the present King of France is bald' - does not exist the question of the truth of the containing singular description does not arise. However it does in ideal language (see Quine, 1960). See in this connection Strawson's criticism (1964).

is characterized by the ideal language philosophers' fascination for a particular model or a paradigm, which, as Strawson points out, equates meaning with reference. In a masterly treatment Strawson (1950) has shown that the question whether a sentence is meaningful or not is independent of the question whether it refers to something. Meaning is a notion which is largely governed by convention or uses of expressions, and these uses of expressions are too complex to fit in with a logico-mathematical model. For understanding the logical working of language we have to think, as Strawson (1952:231) puts it, "in many more dimensions than that of entailment and contradiction, and use many tools of analysis besides those which belong to formal logic".

According to Strawson the basic contention expressed in Russell's theory of descriptions does not accord with our ordinary way of talking about these matters. Russell's theory failed to account for the use of referring expressions in ordinary language. For example, if the statement, "The present King of France is wise" is uttered, the question of asking whether it is true or false does not arise, since there is no present King of France. We would say that the speaker is under some misapprehension in the sense that he thinks that France is still under the monarchy. The Strawsonian interpretation goes totally against Russell's interpretation that the phrase 'so-and-so is such and such' implies that 'the so

so-and-so exists' and hence that, if 'the so-and-so' does not exist, the assertion is false.

The same view was elaborated by Strawson in his Introduction to Logical Theory (1952). For Strawson, the statement 'The present King of France is wise' presupposes that there is one and only one King of France. This has been explained by Strawson in the following schematic term. S is the presupposing statement and S' the statement presupposed, then "S presupposes S'" means that the truth of S' is a necessary condition for the truth or falsity of S. Thus, the question of the truth or falsity of the assertion, 'The so-and-so is such and such' does not arise if 'the so-and-so' does not exist.

Russell's mistake was basically due to his failure to recognize the difference between sentences and the statements which are made by the use of these sentences on particular occasions. Hence a distinction has to be made between the two situations in which the sentence, 'The present King of France is wise' is uttered when France is under the monarchy and when France is not under the monarchy. In both situations, the individuals concerned have uttered exactly the same sentence but in the first case the man who has asserted the sentence has succeeded in making a true or false statement (depending upon whether the monarch is or is not wise) but in the second case, the man concerned did not say anything true or false, since the statement presupposed by his words is false.

Russell thought that since the sentence 'The present King of France is wise' was not meaningless, any utterance of it must therefore either be true or false. But according to Strawson, Russell's interpretation of sentence and statement is wrong. A sentence has meaning but is not true or false whereas a statement can be either true or false. Thus a meaningful sentence can be used to make a statement which is neither true nor false.

We thus broadly indicate the three basic mistakes that underlie the theory of descriptions, first, the failure to see the distinction between sentence and statement, second, the failure to see that only statements can be true or false and not sentences, and third, the failure to see the distinction between presupposition and entailment.

3

Carnap and His Metatheory of Language

We will now examine a particular theory of language developed in the reconstructionist framework. The theory is of Carnap who is regarded as the foremost exponent of ideal language philosophy. Carnap and the associated philosophers following the logical tradition of Russell start with the basic assumption that there is a prima facie distinction existing between grammatical syntax and logical syntax.

Natural languages, since they lack proper linguistic conventions, allow the formation of meaningless sequences of words, such as, 'Caesar is a prime number' without violating the rules of grammar. This shows that grammatical syntax is inadequate from a strictly logical point of view (see, Carnap, 1952). Since metaphysical statements are of this type, they should be regarded as pseudo statements. Such pseudo statements can be eliminated only in a logically perfect language where grammatical syntax corresponds to logical syntax. Thus in a constructed language of logical syntax it is theoretically possible to eliminate metaphysics completely.

Carnap's whole effort is thus directed towards developing a system of logical syntax as a supplement to grammatical syntax. In his book, 'The Logical Syntax of Language' (1937), Carnap provided a detailed outline of his constructed ideal language system which is formulated in purely syntactical terms. Such a system of language or logical syntax, Carnap claims, supplies the proper linguistic conventions which natural languages lack. Carnap's attempt to construct a logical syntax is thus meant to be construed as the formulation of a metatheory dealing with the nature of such ideal language. In the formulation of his metatheory of language, Carnap is highly influenced by the conception of metamathematics developed by Hilbert in the formalist tradition of mathematics. Carnap thought that it was absolutely essential to deal with

language qua calculus i.e. an uninterpreted formal system and to disregard, for the investigation of its syntax, the meaning of its expressions. Directly influenced by Hilbert's system, Carnap tried to build up an analogous model which would serve as a metatheory about any system of logical syntax as an uninterpreted system.

Deeply influenced by Hilbert's model of metamathematics, Carnap tried to construct some kind of uninterpreted formalized language system which would serve as the general theory of the formal structure of scientific and factual discourse. Carnap's constructed ideal language system sought to achieve the emancipation of the ideal language of empirical science and factual discourse from metaphysical sentences. This approach parallels Hilbert's, who tried to make classical mathematics free from contradiction. As Carnap puts it:

The chief motive for my development of the syntactical method, however, was the following. In our discussion in the Vienna Circle it had turned out that any attempt at formulating more precisely the philosophical problems in which we were interested ended up with problems of the logical analysis of language. Since in our view the issue in philosophical problem concerned the language, not the world, those problems should be formulated, not in the object language, but in the metalanguage. Therefore, it seemed to me that the development of a suitable metalanguage would essentially contribute toward greater clarity in the formulation of philosophical problems and greater fruitfulness in their discussions (Carnap, 1963:55).

The search for a suitable metalanguage for philosophical purposes led Carnap to questions concerning the appropriate linguistic framework. It was in this context that he introduced his famous distinction which we have mentioned earlier between the material mode and the formal mode of speech. Sentences in the material mode of speech are assertions of things and events whereas those in the formal mode are assertions about linguistic constructions (see, Carnap, 1937:281ff). Carnap showed that though the material mode of speech is a way of speaking which looks like talk about things, it is in fact always talk about words. The sentence 'Five is not a thing but a number', he argues, appears to be about some object 'five', but the sentence, in reality, is about the term 'five' - the syntactic category of numerical expression. Such sentences of the material mode are all, what Carnap calls, 'pseudo-object sentences' which are, in essence, sentences about the syntactical structure of linguistic constructions. But due to the misleading grammatical form of natural language their true linguistic character is not revealed and they surreptitiously appear as object sentences.

Carnap considers the material mode of speech as a potent source of metaphysics. Philosophers employ pseudo concepts of the material mode (thing, quality, fact etc.) as though they were genuine concepts. They talk in terms of 'things' rather than 'thing-words', 'numbers' rather than

'numerical-expressions'. In order to expose this nonsensical metaphysical character, Carnap proposed the translation of the material mode into the formal mode of speech. Only the translation of the pseudo-object sentences into their corresponding syntactical sentences of the formal mode will explicate the real character of the pseudo-object sentences.

We cite here a collection of statements used by Carnap, as examples, all of which are about language.

<u>Material mode</u>	<u>Formal mode</u>
A rose is a thing.	'Rose' is a thing-word (substantive, noun)
It is a fact that the rose is red.	'The rose is red' is a sentence (statement)
Redness is a quality.	'Red' is an adjective
Five is a number.	'Five' 'stands for' or 'denotes' a number

The above translation scheme dictates a well-formulated anti-metaphysical principle of Carnap. Any sentence in a natural language, if it is not an object sentence, and if it cannot be translated into the syntactical mode, is cognitively meaningless.

Carnap's translation scheme involves certain basic errors. We will show that within the system itself logical syntax contains certain built-in defects. We will also argue that the inadequacy of the translation scheme reflects essentially the inadequacy of the systems within which the

translation is carried out. The basic issue that we want to raise is the following: Can linguistic description be adequate and complete by means of a purely syntactic description? How far are syntactic concepts alone able to express the content of pseudo-object sentences? We explain it in terms of Carnap's own example.¹

The pseudo-object sentence:

'Babylon was treated of in yesterday's lecture'.

The syntactical sentence:

'The word 'Babylon' occurred in yesterday's lecture'.

We first point out that the supposed translated syntactical sentence is not really a syntactical one, that is, the expression 'occurred in yesterday's lecture' is a predicate for events and not linguistic types whose token can be used to designate events. Again, the translated sentence is not only different in meaning from the one (i.e. pseudo-object sentence) whose translation it is, but both the sentences are also not equivalent in the sense that both could be true or false under the same condition. For example, though the word 'Babylon' occurred in yesterday's lecture', yet the theme of the lecture did not need to be Babylon. The word 'Babylon' might be mentioned by mistake, or it was just mentioned for the sake of some secondary

1. Our criticisms are based on such works as Katz (1966), Strawson (1963), Beth (1963) and Bar-Hillel (1963).

information. On the other hand though 'Babylon' was treated of in yesterday's lecture, yet the word 'Babylon' was not uttered, since the theme of the lecture was so obvious that there was no need to mention it. In view of these difficulties another form of translation was offered, i.e.,

'In yesterday's lecture the word 'Babylon' or a synonymous designation occurred'.

But this alternative mode of translation does not in any way improve the situation. The word 'Babylon' or any synonymous designation does not establish the fact that the theme of the yesterday's lecture was Babylon. So the objection still stands. Carnap's new proposal merely begs the question of whether syntactical concepts alone could express the content of such pseudo-object sentences. The method of translation should be such that it can provide the explicit procedure by which we can say that the sentence which is about yesterday's lecture entails that the discourse was about the city of Babylon or was not about the city of Babylon.

The question-begging character of Carnap's method of translation becomes apparent when we look at those crucial concepts like, 'synonymous designation', 'entails', 'about' which are indispensable for any translation. But these concepts are essentially semantic and not syntactic concepts. Thus the use of these semantic concepts provides a real thrust to Carnap's whole programme.

Similarly, Carnap does not explicate the formal properties that a sentence must have in order to be analytic, (i.e., true by virtue of the meanings of the terms) and contradictory (i.e. false by virtue of the meanings of the terms). The concepts which constitute the very basis of logical syntax have not been sufficiently explained and analyzed. Though these concepts are employed in translation and are used in the definition of other concepts, nothing has been said as to what criteria must be used in applying them. What this reflects is an essential vacuity or emptiness in the theory.

In the same way, Carnap's idea of translation from the material mode into the formal mode of speech is based on an unclear distinction. Apart from his distinction of syntactical sentences, his other forms of sentences are quite unclear. Carnap's example of an object sentence 'Caesar is a prime number' is grammatically acceptable but is logically nonsense in the sense that it commits a category mistake, i.e., the numerical status is ascribed to a noun that is human. But it is important to note that Carnap's synthetical theory does not provide any device by which to decide when such mistakes occur and when they do not. There are other cases of logical nonsense which are not of the above type such as, 'The Absolute is perfect', 'Nothing nothings', where Carnap's theory is not explicit in locating what mistake is committed and how it is committed.

This shows that Carnap's three basic theoretical categories, 'genuine-object sentence', 'translatable pseudo-object sentence' and 'untranslatable pseudo-object sentence' lack any description. There exist no methods by which it could be decided when a sentence of natural language is to be assigned to one or the other category. In other words, there are no explicit means by which to classify sentences under any of these supposed categories. Thus, in the absence of a proper distinction, it cannot be maintained that the lack of a syntactic correlate of a sentence expressed in the material mode of speech is a metaphysical sentence.

There is another difficulty in connection with Carnap's translation scheme. A serious methodological difficulty is created when he accepts the possibility of different theories of logical syntax. By accepting this possibility, Carnap also allows the possibility of different translations of the same sentence. Furthermore, he has not given any arguments for the choice of his own theory of logical syntax. Clearly he considers this unnecessary. His position is stated in the following words,

Everyone is at liberty to build-up his own logic, i.e., his own form of language, as he wishes. All that is required of him is that if he wished to discuss it, he must state his method clearly, and give syntactical rules instead of philosophical arguments (Carnap, 1937:52).

This is known as the principle of tolerance. Thus, for example, a metaphysical sentence such as 'The Absolute is perfect' may not receive any syntactic correlate in a certain

system and be regarded as metaphysical nonsense, but the same sentence in another system may receive a syntactic correlate and be regarded as a perfectly meaningful sentence. Thus arbitrariness is assumed of the very foundation of the system which leads to different translation of the same sentence.

These above difficulties led Carnap to think of a more extended approach. Under the influence of Tarski's analysis of 'truth' he realized that an ideal language based solely on syntax cannot explicate the meanings properly. In his Introduction to Semantics, Carnap himself acknowledged this change. He said that certain concepts hitherto regarded as syntactical are basically semantical. These include 'range', 'extensionality', 'analytic', 'synthetic', 'contradictory', 'implications' and 'equivalence'. In Carnap's later works, reference to semantics, as Max Black (1954:260) observes, "almost replaces the earlier reference to syntax". In Carnap's own admission:

....logic, in the sense of a theory of logical deduction and thereby of logical truth, is a special part of semantics (Carnap, 1942:56).

Again,

....logic is a special branch of semantics.... logical deducibility and logical truth are semantical concepts. They belong to a special kind of semantical concepts which we call L-concepts (Carnap, 1942:56).

For Carnap, it is wrong to suppose that every expression in a well-formed language is the name of a concrete

subsistent entity. On the other hand, argues Carnap, an expression is meaningful by virtue of its possessing an intension and an extension, or to use Frege's words, sense and reference. So according to Carnap's formulation semantics studies the relation between linguistic entities and the state of affairs in the world to which they refer. It also studies the relation between sentences and the conditions in the world which are necessary to make the sentences true. Let us then look at the revised, semantic framework as provided by Carnap. In order to illustrate the ideal language philosophers' theory of semantics we will discuss briefly Carnap's treatment of analyticity and meaning postulates as given in Meaning and Necessity. Carnap first tried to give a formal definition of analyticity in terms of the concept of state description as amended by him. This amended version also met with difficulties. So, in Meaning and Necessity, he makes use of the notion of meaning postulates which he ascribes to Kemeny.

Carnap's definition of analyticity in terms of the notion of state description can be seen as an attempt to make a formal definition of Leibnitz's notion of necessary truth. It was Leibnitz who first made a distinction between two kinds of truth; necessary and contingent. A necessary truth is that which holds in all possible worlds. Carnap's notion of state description is an attempt to formalize the notion of a possible world with respect to a given language. For Carnap, the

language with respect to which the concept of state description is used must have an individual constant which would designate each individual in the intended domain. In other words, a language must have an enumerable infinity of individuals (i.e. a countable set). Given this requirement, it is further held that the language has as primitives logical operations, e.g., negation, alternation, and universal quantification. An atomic sentence of this language could be defined as a sentence consisting of an n -ary predicate followed by n -individual constants. We could now define a state description of a language. A state description of our language could be defined as a class of sentences of a language in which every atomic sentence contains either the given atomic sentence or its negation but not both.

This notion assumes full significance when it is considered in the light of the interpreted calculus. To say that a given sentence holds in a given state description means that the given sentence would be true if the given state description is true. As we know from Carnap's definition, every sentence either holds or does not hold in a given state description; therefore, the truth of a given state description uniquely determines the truth value of every sentence. This is similar to what Leibnitz had said: every state description of our language determines a possible world with respect to our language.

But Carnap cannot stick to his original position according to which the notion of state description is identified with the notion of possible world. The difficulty which Carnap faces is that when an interpretation is given to our language it may turn out that some of the state descriptions involve contradictions and thus do not describe any possible world. Contradictions arise if language contains extra logical synonym-pairs, like 'bachelor' and 'unmarried man'. In other words, contradictions arise if the atomic sentences of our language are not mutually independent. If there are atomic sentences in a language like 'John is a bachelor' and 'John is unmarried', there is a possibility of some state description which will contain sentences like, 'John is a bachelor' and 'John is not unmarried'. Such a state description clearly shows contradictions and does not represent any possible world.

Carnap tries to overcome this difficulty by introducing the notion 'meaning postulate'. If the intended interpretation of the predicate constants of our language assumes predicates which are not independent, such as bachelor and is an unmarried man then the logical dependencies of these predicate constants are to be shown by means of a set of rules called meaning postulates. Accordingly, B is a predicate constant which is interpreted as is a bachelor and U is a predicate constant which is interpreted as is an unmarried man, then one of the meaning postulates will be

$$(x) [[B(x) \vee \sim U(x)] \wedge [\sim B(x) \vee U(x)]]$$

The given meaning postulate states that if something is a bachelor, it is also an unmarried man, and if something is an unmarried man, it is also a bachelor. Thus, what the meaning postulate essentially does, as Kemeny (1963:62) observes, is to "serve for extra-logical terms analogously to the way that the logical axioms serve for logical constants".

So Carnap introduced meaning postulates and semantical rules in the same way in which axioms and inference rules are introduced in an axiomatic system. Their function is to stipulate the meaning relation existing between the descriptive symbols and the expressions constructed out of those descriptive symbols. They provide an interpretation for the descriptive symbols in the same way in which the axioms may be seen as defining the primitive notions. Thus Carnap's new proposal suggests that the semantic relation upon which an inference rests, if it is not given by the interpretation of the logical symbols, can be given in the form of a meaning postulate or a semantical rule.

Thus, with the help of meaning postulates and semantical rules, Carnap sought to provide an interpretation for the basic semantic relationships such as analyticity, synonymy, incompatible constructions, etc. Carnap claims that every semantic term in his semantic theory must be defined in terms of the semantic rules of the given theory since the meaning of the semantic terms is determined only with

reference to a given semantic system. Thus a sentence is analytic if its truth is established by the semantic rules of the language alone. So, analyticity, synonymy, etc. could now be specified in terms of a list of conventions included in 'meaning postulates' or 'semantical rules'.

Carnap's new semantic proposal, however, is in no way free from difficulties. His later theory is vitiated by the same kind of difficulties as his earlier theory of logical syntax. The basic shortcoming of his approach is that his theory lacks proper linguistic justification. It is due to the absence of such linguistic justification that the meaning postulates and the semantical rules, as stipulated by him, become arbitrary and fail to offer any substantive basis for settling certain philosophical controversies. This is evident in Carnap's own words:

Suppose the author of a system wishes the predicates 'B' and 'M' to designate the properties Bachelor and Married, respectively. How does he know that these properties are incompatible and that therefore he has to lay down (the meaning postulate, 'For any x, if x is B, then x is not M')? This is not a matter of knowledge but a decision. His knowledge or belief that the English words 'bachelor' and 'married' are always or usually understood in such a way that they are incompatible may influence his decision if he has the intention to reflect in his system some of the meaning relations of English words.... Suppose he wishes the predicates 'Bl' and 'R' to correspond to the words 'black' and 'raven'. While the meaning of 'black' is fairly clear, that of 'raven' is rather vague in everyday language. There is no point for him to make an elaborate study, based either on introspection or on statistical investigation of common usage, in

order to find out whether 'raven' always or mostly entails 'black'. It is rather his task to make up his mind whether he wishes the predicates 'R' and 'Bl' of his system to be used in such a way that the first logically entails the second.... Those who construct systems...are free to choose their postulates, guided not by their beliefs concerning facts of the world but by their intentions with respect to the meanings, i.e., the ways of use of the descriptive constants (Carnap, 1956:224-225).

But the liberal attitude expressed in the above passage is definitely detrimental to Carnap's whole programme. We quote Nelson Goodman's observation on the so-called attitude of tolerance as expressed in Carnap's programme of formal semantics.

Reluctant as I am to cast a shadow on all this sweetness and light, there are limits to my tolerance of tolerance. I admire the statement tolerant of divergent political opinions, and the person tolerant of racial and educational differences, but I do not admire the accountant who is tolerant about his addition, the logician who is tolerant about his proofs, or the musician who is tolerant about his tone. In every activity satisfactory performance requires meticulous care in some matters; and in philosophy, one of these matters is the choice of systematic apparatus or 'linguistic form' (Goodman, 1971:304).

A system of artificial language, if constructed in such a manner, can assume anything whatever included among its meaning postulates and semantical rules. It could have only those features which its author decide to assign to it. In such a situation, it is quite possible that with respect to different authors there could be different constructed languages. This indicates that it is quite futile to search for a basis by which to decide which language could serve as the ideal

language for solving philosophical problems. Accordingly, the solution to the philosophical problems will be relative to the given language system. Thus, corresponding to different language systems there could be different solutions for the same philosophical problem.

If sufficient attention is not given to the actual structure that is manifested in natural languages, it will be impossible to give any rationale for the choice of a particular artificial system upon which the theory is based. In Carnap's case, synonymy and analyticity are defined in terms of semantical rules, i.e. extensionally and not intensionally (see Quine below).

Thus, arbitrariness is involved in the very system itself. This arbitrariness is not just a result of Carnap's conventionalism. It is rather a manifestation of a far more deep-rooted problem associated with the theory itself. Arbitrariness in the present context is mainly due to the vacuous nature of meaning postulates and semantical rules. For example, the formal notion of analyticity is explained in terms of the equally formal notions of semantical rules. Thus, whether or not a sentence is analytic is decided by virtue of a set of conventions. But this involves, as Quine pointed out, a real difficulty. As Quine puts it:

...the difficulty is simply that the rules contain the word 'analytic', which we do not understand! We understand what expressions the rules attribute analyticity to, but we do not understand what the rules attribute to those expressions. In short, before we can understand a rule which begins 'A statement S is analytic for language L_0 if and only if...', we must understand the general relative term 'analytic for', we must understand 'S' is analytic for L where 'S' and 'L' are variables (Quine, 1953:33).

So the notion of analyticity is left unexplained. On the other hand, analyticity could be defined in terms of the notion of semantic rules or meaning postulates: a sentence will be regarded as analytic if it is true according to the semantic rules and meaning postulates. But this interpretation does not change the situation. This is also equally empty. Quine brought this out clearly:

Still there is really no progress. Instead of appealing to an unexplained word 'analytic', we are now appealing to an unexplained phrase 'semantical rules'. Not every true statement which says that the statements of some class are true can count as a semantical rule - otherwise all truths would be 'analytic' in the sense of being true according to semantical rules. Semantical rules are distinguishable, apparently, only by the fact of appearing on a page under the heading 'Semantical rules', and this heading is itself then meaningless (Quine, 1953:34).

In view of the difficulties pointed out by Quine, Carnap turned his attention to pragmatics which is the final component of his theory of language. The motive for Carnap to come to pragmatics is, first, to save his semantic theory from vacuity, i.e. to provide content to empty concepts like analytic sentence, synonymous construction, etc. and second,

to provide justification for meaning postulates and semantical rules. In order to do this, Carnap attempts to give what he calls a "pragmatic substructure" to his semantic theory by introducing operational definitions for certain key semantic concepts such as synonymy and analyticity. Carnap's task now is to state an empirical, behaviouristic procedure which will enable him to determine the applicability of the concepts. As Carnap states his thesis:

In the case of the semantical intension concepts there is an additional motivation for studying the corresponding pragmatical concepts. The reason is that some of the objections raised against these semantical concepts concern, not so much any particular proposed explication, but the question of the very existence of the alleged explicanda (i.e., the concepts that are clarified and refined in the process of explication). Especially Quine's criticism does not concern the formal correctness of the definitions in pure semantics; rather, he doubts whether there are any clear and fruitful corresponding pragmatical concepts which could serve as explicanda. That is the reason why he demands that these pragmatical concepts be shown to be scientifically legitimate by stating empirical, behaviouristic criteria for them. If I understand him correctly, he believes that, without this pragmatical substructure, the semantical intension concepts, even if formally correct, are arbitrary and without purpose.... If for a given semantical concept there is a familiar, though somewhat vague, corresponding pragmatical concept and if we are able to clarify the latter by describing an operational procedure for its application, then this may indeed be a simpler way of refuting the objections and furnish a practical justification at once for both concepts (Carnap, 1956:234-235).

The basic concept with which Carnap starts his analysis is that of the intension of a term. The meaning or intension of a descriptive term is defined by Carnap as a

set of general conditions (C) which things or events must satisfy. Now, in order to have a clear statement of (C), the linguists ask the speakers questions concerning the scope of the applicability of the word, that is, how far they are willing to apply the term to various things. In their inquiry the linguists may not restrict the applicability of a term to real objects and events only. He may ask about fictional things also. As Carnap says:

But what else is there to investigate for the linguist beyond Karl's responses concerning the application of the predicate to all the cases that can be found? The answer is, he must take into account not only the actual cases, but also possible cases (Carnap, 1956:235).

Thus, for example, in trying to determine the intension of the term unicorn the linguist might describe a unicorn by saying 'a thing similar to a horse, but having only one horn in the middle of the forehead' and then ask whether the speaker is willing to apply the term 'unicorn' to such a thing. With the help of such a procedure it is obvious that the linguist could arrive at different intensions of unicorn and horse. Thus Carnap, while concluding his account of the method for determining the intensions of different terms, writes:

Although I have given here only a rough indication of the empirical procedure for determining intensions, I believe that it is sufficient to make clear that it would be possible to write along the lines indicated a manual for determining intensions or, more exactly, for testing hypotheses concerning intensions. The kinds of rules in such a manual would not be essentially different from those customarily given for procedure in psychology, linguistics, and anthropology (Carnap, 1956:240).

By suggesting an operational procedure to characterise these concepts Carnap intends to provide a basis for demonstrating that there exist phenomena which can be described by the definitions of pure semantics, or to use his own terminology, there exist explicanda for the intension concept of pure semantics. But Carnap's whole approach, we argue, has failed to see Quine's criticism in its proper perspective. Carnap, as a matter of fact, missed the essence of Quine's point.

Regarding analyticity Quine said:

The notion of analyticity about which we are worrying is a purported relation between statements and language: a statement S is said to be analytic for a language L, and the problem is to make sense of this relation generally, that is for variable 'S' and 'L' (Quine, 1953:33).

Quine's main contention is that Carnap's explication of the pragmatical concept of analyticity does not really explain the concept of analyticity. His meaning postulates and semantical rules do not explicate what are the properties a sentence must have in order to be analytic. Rather, their function is merely to specify which sentences are analytic, contradictory, synonymous etc.

A general question that could be asked is, "How far does Carnap's proposal of a behavioural test and an operational definition succeed in characterizing the concepts 'analyticity', 'synonymy' etc. In other words, do they contribute anything to our understanding of the abstract concepts of pure

semantics? The answer to this question cannot be in the affirmative. The reason for the failure is that the concepts which are to be explicated are already presupposed in the operational definition itself. The behavioural tests which are introduced for the purpose of explication rely on the linguists' and the speakers' intuitive understanding of those concepts which are to be explicated. In order to see the theoretical flaw in the whole approach it may be worthwhile going into some detail. This we will do in our examination of ordinary language philosophy.

It is only within an adequate and comprehensive theory of natural language that abstract semantic concepts like analyticity and synonymy can be handled. Questions like, "Why don't we use synonymous expression in the same referential case?" can be answered only when we operate with a theory. Similarly, between two expressions when one is ambiguous and the other is synonymous with one of its senses (as in the case of 'bachelor' and 'unmarried adult male') a theory which incorporates some technique of disambiguation is needed to show that the speaker in this case will apply the word 'bachelor' only to 'unmarried adult male', since the other sense of the word 'bachelor' will be applied to those cases where the expression 'unmarried adult male' does not apply. The important point that follows is that unless we have a theoretical account of synonymy we cannot decide these questions on a purely operationalistic ground.

From the above discussion it becomes evident that behavioural tests and operational definitions are bound to fail if there are no theoretical accounts which explain abstract semantic concepts. Carnap's mistake was to think that behavioural tests and operational definitions alone could do the job for which a theoretical basis is absolutely necessary. Behavioural tests and operational definitions, as we have seen, cannot provide explanations for the basic concepts of semantics since the very possibility of using behavioural tests depends on a prior understanding of those concepts. Hence they must be provided by an independent theoretical analysis. Without an understanding of these concepts we cannot properly formulate behavioural tests, nor can we correctly evaluate the results since it is the theory which decides whether a particular formulation of a test is adequate to confirm the right linguistic property which we are looking for. Behavioural tests are not meant to replace theory but to confirm or disconfirm the theories in the framework of which abstract concepts are defined.

Finally, we point out that Carnap's third phase shows a methodological crisis in the very foundation of his programme. The third phase clearly shows how Carnap slowly abandons the ideal language approach in favour of an ordinary language approach and a behaviouristic analysis of intension. Carnap realized that the artificially constructed language cannot

really account for the structural complexities of natural language. He, therefore, saw the importance of natural language and accordingly moved in the direction of pragmatics. But this shift of interest is not just a change in his approach. Indeed his acceptance of pragmatics may be regarded as a confession of defeat.

4

The Critical Evaluation of the Ideal Language Approach

In the above we have examined Carnap's metatheory of language and tried to show its arbitrary and vacuous nature. These features are not accidental but built into the system itself. The failure of Carnap's approach lies not in some particular detail but in the entire approach of constructionism. It is the whole ideal language approach that is confronted with a serious question. The failure of Carnap's system casts doubt on the fundamental assumption of the ideal language philosophy that indicates a deep rooted conceptual problem, that is, a formal language approach can help explain the structural complexities of natural language.

Strawson (1963), while examining Carnap's system, concludes that (1) the model provided by the formal language approach ignores the 'entangled geography' of ordinary concepts; (2) that philosophical problems arise characteristically in

such linguistic entanglements of natural language which the formal model ignores and, therefore, (3) in order to make the formal language approach philosophically relevant, it must be supplemented by natural investigation. Thus in Strawson's opinion:

...typical philosophical problems about the concepts used in non-scientific discourse cannot be solved by laying down the rules of use of exact and fruitful concepts in science. To do this is not to solve the typical philosophical problem, but to change the subject (Strawson, 1963:506).

Any formalized system can be a revealing theory of natural language only when it can truly represent the structure of natural language and not that of relatively simple arbitrarily chosen fragments for an artificial language. Those philosophers who claim formal semantics to be a theory of natural language must note, first, that the various ideal languages hardly resemble natural languages and, second, that the concepts of formal semantics do not correspond to our intuitive understanding of such semantic notions as analyticity and synonymy.

The theory of descriptions as developed in the framework of formal semantics is far from being adequate in the sense that it does not properly describe the way we refer to things in natural languages. As we saw in our earlier discussion on the question of semantic interpretation for an uninterpreted calculus, the function of semantic rules is to provide designation for individual and predicate constants as

well as domains for individual and predicate variables. But the theory of descriptions built on the pattern of such an oversimplified model cannot account for many of the elementary problems arising in natural language. For example, an ambiguous sentence like 'I struck the boy with the bat', has two readings: in one reading a boy with the bat is referred to, in the second, just the boy is referred to. The theory of descriptions developed in formal semantics is not equipped to give such readings.

Such failures in ideal language theory lead us to ask how far the tools of formal logic are capable of explaining the logical features of natural language. Philosophers have shown that such logical systems as the propositional and predicate calculi do not completely represent the complex logical features of natural language. Strawson, for example, by studying the behaviour of the logical connectives has shown that the connectives like ' \vee ', ' \supset ' and ' \equiv ' are much less like ordinary language notions of 'or', 'if' and 'if and only if'. This has resulted in the well-known paradoxes of implication in both truth functional and strict implication systems.

Indeed we find that for every idiom of an ideal language there exist many idioms of natural language which are forced into correspondence with it. It is because of the algorithmic method used in ideal language that such a reduction

becomes a necessity.¹ But the price paid for algorithmic purposes is very great indeed; the resulting 'ideal' language, is greatly impoverished.

Zeno Vendler (1967:70ff) illustrates this point well in his analysis of quantifiers. According to Vendler, the basic mistake of the ideal (formal) language is that by reducing all sentences (in which such quantifiers occur) to a fixed model, prescribed by quantification theory, it neglects many of the important logico-linguistic features of natural language. In quantification theory 'each', 'every', 'all', 'any' are lumped together on 'the ground that they presuppose the same logical structure'. The difference associated with these terms, they argue, are mere stylistic variations. But as Vendler shows, by doing this, the ideal language philosophers evade many of the issues concerning the types of reference, existential import, and law-like form of general propositions. For our purpose, we will see the difference between 'all' on the one hand and 'each' and 'every' on the other.

1. An explicit statement of this is found in Quine when he says: "Quantification cuts across the vernacular use of 'all', 'every', 'any', and also 'some', 'a certain', etc., ...in such a fashion as to clear away the baffling tangle of ambiguities and obscurities.... The device of quantification subjects this level of discourse, for the first time, to clear and general algorithm" (Quine, 1951: 70-71).

The expressions 'each' and 'every' are always followed by the noun in its singular form, whereas 'all', stands for the plurality. The differences associated with 'all', 'every', 'each' are embedded in the very meaning of the words. Let us take the following propositions used by Vendler:

1. All those blocks are yellow.

and

2. All those blocks are similar.

In case of the first sentence the corresponding sentence expressed in terms of 'each'

1.1 Each (everyone) of those blocks is yellow.
is true.

But, in case of the second sentence the corresponding sentence expressed in terms of 'each'

2.1 Each (everyone) of those blocks is similar.

is an incomplete sentence in the sense that a question like 'similar to what?' is immediately raised along with the question (2.1).

The important linguistic conclusion that Vendler tries to draw from the above illustration is that in the case of the non-relational predicate, the difference associated with the function of 'all' and that of 'every' and 'each' "do not register to the truth values of the propositions in which they occur", whereas in case of the relational predicates (e.g. 'are similar', 'fit together') the difference could be brought

In his paper 'Metaphysics in Logic' W.H. Warnock (1966) does for the existential quantifiers what Vendler has done for the universal. He shows that the existential quantifier has failed to serve a greater role since it imposes "the neat simplicity of logic upon the troublesome complexities of language". The notion of an existential quantifier assumes that language can be reduced to quantificational logic and that a single uniform meaning could be attached to 'is' or 'is not', 'does exist' or 'does not exist' corresponding to the meaning of expressions allowed to be substituents for bound variables and expressions "debarred from such employment". But what they fail to notice is that the word 'is', 'exists' etc. are expressions which have great variety of uses and elasticity.

We see from the above analysis that the logical behaviour of expressions of natural language is quite intriguing and therefore to study them in a context-free manner is bound to lead to oversimplification.

We can now see that arbitrariness is not a feature of a particular brand of ideal language theory but is involved in the very foundations of the ideal language programme. If a theory is developed with reference to an arbitrarily chosen system, it can never serve as an adequate theory of natural language, explaining the various structural details and complexities of day to day language through which man communicates. Depending on the constructed systems, there could be

different theories of artificial language which differ widely in the respective structures which they permit. In our discussion of Carnap we have already noted that if sufficient attention is not given to the actual structure that is manifested in natural language, it is impossible to give any rationale for the choice of a particular artificial system upon which the theory of syntax and semantics is based. In the absence of any empirical constraints it is equally impossible to say which theory, when more than one is given, is more accurate in describing the structure of natural language. Under this condition all theories of artificial languages are considered equally justified in so far as they satisfy the criterion of consistency.

However, though ideal language philosophers accept the fact that their constructed languages may assume any structure that they desire to give to it, in practice the majority of ideal language philosophers construct their languages in the pattern of the logistic model provided by Principia Mathematica¹. This does not in any way improve the situation.

1. A statement from Richard M. Martin shows that the system of logic used by the philosophers for this purpose is mostly the one provided by Principia Mathematica. "By 'logic' is not meant here recursive function-theory, California model-theory, constructive proof-theory, or even axiomatic set-theory. Such areas may or may not be useful for linguistics. Rather under 'logic' are included our good old friends, the homely locutions 'and', 'or', 'if-then', 'if and only if', 'not', 'for all x', 'for some x' and 'is identical with', plus the calculus of individuals, event-logic, syntax, denotational semantics" (Martin, 1969:262).

We have already seen, particularly from Strawson's critique of Russell's theory of descriptions, the restricted scope of such models. However, in view of the recent developments in linguistics, a general point can be made which shows how the grammar of a logistic system is inherently weaker than the grammar of a natural language (see, Chomsky, 1951). The transformational generative theory of language has succeeded in exhibiting much of the 'complex' structure of natural language. It contends that language is an enormously involved system with multiple operations of extremely complicated type as compared to the simple structure of logistic system like that of Principia Mathematica. The rules that are employed in a logistic system to characterize well-formedness are of a context-free constituent grammar, whereas the rules that characterize sentencehood in a natural language are rules of a context-restricted grammar. A basic claim made by Chomsky is that, to achieve a complete and explanatorily adequate grammatical description, grammatical rules need to be transformational i.e. context-sensitive. Thus the rules that constitute the grammar of a natural language are far more complicated than the set of formation rules postulated in the grammar of a logistic system.

In the light of the contribution made by Chomsky and his school in systematically accounting for the structure of natural languages, a formal system such as ^{the}as/logistic system

not only looks very impoverished but its claim that natural language is too irregular and unsystematic to be theoretically described becomes questionable.

Ideal language philosophers, in answer to the charge that they are not true to natural language, argue that all systematic theory must to some extent represent an ideal to which the subject matter being described can only approximate. So, to expect that a theory would account for every detail of natural language is unreasonable and unrealistic. The ideal language philosophers contend that the theory of artificial language is meant to be an idealization of a natural language in the same way in which constructs in physics represent idealizations of physical states and objects. Now in sciences, idealizations are made basically for the purpose of bringing the complexities of phenomena under an integrated and controlled system which would describe the behaviour of the phenomena in terms of simple laws, e.g. the physicists introduced ^{the} ideal gas to formulate Boyle's Law.

But the most important point to note in this connection is that an abstract theory has no physical significance until it is translated into observational terms. The scientists thus propose a set of correspondence rules. These correspondence rules are meant to interpret the theory by translating theoretical language statements into observation language statements. Thus a theory consists of a set of

statements which account for a number of empirical laws, in the sense that by deduction from the theory, one can arrive at statements identical with the empirically established laws.

Such methodological procedure as described above is absent in the construction of ideal language theories. If a theory of language does not have correspondence with empirical phenomena belonging to natural language it cannot answer questions like, "Under what conditions are two expressions synonymous?" or "Under what conditions is a sentence analytic"? Katz and Fodor bring out the vacuous nature of the ideal language theory in following words:

Suppose we have three artificial languages L_1 , L_2 and L_3 each of which is regarded as an idealization of the natural language L . Suppose further that the sentence S in L is taken to be analytic in L_1 , synthetic in L_2 , and neither in L_3 . How do we tell which of these languages is the best idealization of L ? We must ask whether S is in fact analytic, synthetic or neither in L . But clearly we require a theory of the semantic structure of L to answer this question. Such a theory would have to explicate the notions 'analytic in L ', 'synthetic in L ' (Katz and Fodor, 1962:204).

The ideal language theory has been proved to be vacuous since it does not perform the task which any adequate theory must do, i.e. to systematize existing facts or already known facts and to show how they are interrelated.

The ideal language philosophers' basic assumption that natural language is so unsystematic and irregular that any attempt to construct a theory of natural language is futile

is based on a complete misconception about natural language. Atleast two arguments, one methodological and the other theoretical, can be given against this supposition of the ideal language philosophers.

Katz and Fodor pointed out that the failure of a theory to describe the complexities of natural language may mean either that natural language is so unsystematic that it cannot be described by a theory or it may mean that the theory is not powerful enough to describe the complexities of natural language. The failure of ideal language philosophers to capture the richness of natural language does not imply that such richness cannot be accounted for by any systematic theory; what it shows is that they have not been able to do so. In any inquiry, to start with the assumption that the given subject matter is unsystematic, is, in fact, an instance of bad methodology.

Prima facie evidence against the ideal language philosophers' supposition that natural language is unsystematic is found in the transformational generative linguistics of Chomsky and the cognitive psychology of Piaget. It has been shown that children at a very young age and within the span of a short time learn to speak fluently. They can construct not only new grammatically and semantically correct sentences but even the very nature of their mistakes indicate that their learning of language must be done in a systematic and

coherent manner. If natural languages were so highly irregular and unsystematic as the ideal language philosophers thought it to be, then children could not master it at such an early age and in such a short time.

This leads us to the question of how a theory of language is essentially concerned with linguistic competence or the speaker's intuitive knowledge of the rules of language. The fact that the speakers have the knowledge of the rules of language is the very basis of natural language. The inevitable shortcomings of the ideal language approach is that it does not recognize the intuitive notion of necessity that is involved in the speaker's use of language. This intuitive understanding of language cannot be denied. In other words, intuition cannot be totally formalized. The ideal language approach becomes theoretically sterile and methodologically unsound precisely because of it not recognizing the foundational basis of language.

CHAPTER 3

WITTGENSTEIN, LINGUISTIC NATURALISM AND THEORY OF LANGUAGE

In our earlier discussion we have seen that for the constructionists, natural languages are essentially amorphous; therefore a more suitable vehicle of philosophical reasoning would be a formalized artificial language built after the pattern of the logico-mathematical model. The present discussion deals with the ordinary language philosopher's approach to language. This approach also starts with the premise of the amorphousness of language but it reacts to it in the opposite way; for the ordinary language philosophers, any attempt to theorize about the structure of a natural language is to adopt a very narrow and partial view. Language is an essentially human phenomenon which should be studied empirically. Such a study of language would reveal that it cannot be constructed by the simple and rigid framework described in the constructionist's programme. Language is an enormously involved system which consists of important varieties of discourse, with different functions and different ways of fulfilling them.

The method of ordinary language philosophy involves taking a certain view of language and meaning. Ordinary language philosophy undertakes an operationalistic analysis of language and supports a kind of behaviourism which can be

characterized as logical or analytical¹ (see, Sellars, 1964).

In the methodology of their investigation the ordinary language philosophers are guided by the principal assumption that natural languages are unstructured and unsystematic conglomerations of verbal constructions. Linguistic competence is thus regarded as habit or disposition to respond with particular verbal constructions in an appropriate situation. It is because of this behaviouristic bias that ordinary language philosophers allow the use of only those concepts in the description of natural language whose content refers to observable features of the speech signal and whose conditions of application are given in terms of overt behaviour. This means that for them there is nothing in the structure of a language which cannot be acquired as inductive extrapolation from observed regularities in speech behaviour. Language is thus defined solely in terms of communication and meaning is defined in terms of the rules of usage. All these elements in ordinary language philosophy lead its proponents to deny the significance of the basic distinction between la langue and la parole or the distinction between the underlying system or structure and its manifestations in actual utterances. As a result, ordinary language philosophers concentrate their efforts on describing the details of language use and they thus accumulate a large number of particular facts about usage.

In what follows we will try to show that in spite of this massive collection of the facts of usage and in spite of the fact that their analyses provide some of the best examples of careful and insightful semantic description, they fail to provide any principled insight into the nature of linguistic structure. Their failure in this respect leads them to a number of implausible conclusions concerning the nature of language. The main objective of this discussion is to reaffirm the distinction, variously named la langue-la parole (de Saussure), system-text (Hjelmslev), competence-performance (Chomsky), structure-communication (Strawson), and to show the prima facie importance of the study of structure in the philosophy of language. In exposing and rejecting the framework as well as the methodology of ordinary language philosophy, we need first to discuss its philosophical foundations and presuppositions.

Thus this chapter consists of two sections. The first section will be concerned with describing the philosophical foundations and presuppositions of ordinary language approach and the second section with evaluating the philosophical claims of ordinary language approach.

Wittgenstein, Oxford School and Their Philosophical Presuppositions

Quite a few philosophers have tried to give an explicit foundation to ordinary language philosophy. Wittgenstein's contribution in this regard is particularly significant. In all of his post-Tractatus writings the 'master issue' with which he was concerned, as Ryle (1951) and Strawson (1967) have observed, was the nature of philosophy itself. In this sense, Wittgenstein in his later works was largely preoccupied with metaphilosophical questions and issues. In our exposition, we will discuss the methodological foundations of the ordinary language philosophy mainly in the light of the philosophical model as proposed by the later Wittgenstein and shall compare it with the position he took in his earlier work.

The early Wittgenstein conceived of language as a logically rigid essence that lies beneath the contingent surface of ordinary discourse, a structure which is to be discovered by a penetrating analysis. In the Investigations, Wittgenstein takes a fresh look at language and tries to see it in its actual observable form. He thus abandons his earlier conviction that the logic of Principia Mathematica represents the essential structure of all significant human discourse. Russell's logic does no doubt provide an

explanation of the structure of certain kinds of formalized mathematical thinking, but this in spite of its enormous significance is after all just one kind of thinking. Wittgenstein's later works can be viewed as a response in terms of philosophical empiricism to logical formalism. This kind of approach to language was initiated by him when he realised the shortcomings of the theory of language developed in the Tractatus. The difficulties that Wittgenstein faced in the Tractatus ultimately led him to develop his later approach and to suggest that since language was a human phenomenon, it must be studied empirically. In doing this he laid the foundation of an alternative conception of philosophical analysis of language which is variously called 'ordinary language philosophy', or 'therapeutic positivism' etc.

Ordinary language philosophy is not an isolated and independent movement. It is one of the major strands of logical empiricism, the difference between the ^{two} \angle is procedural rather than theoretical. As Feigl observes "... this informal but often very brilliant method is fundamentally not as different as it may appear from either the older positivistic-pragmatist approach, or the more rigorous logical reconstruction method" (Feigl, 1964:5).

Wittgenstein's Investigations holds the view that philosophy starts with a puzzlement. One such puzzlement lies in the existence of paradoxes such that a particular

set of apparently true propositions may lead to an implausible conclusion which contradicts that which is known to be the case. Sometimes the conclusion may not seem to be implausible, but may nevertheless be revealed to be senseless on analysis, since it is an illegitimate combination of words.

Examples of this kind of paradoxical result are to be found only too often in philosophy. Metaphysics, for example, is an inquiry which is largely an outcome of these philosophical puzzles. From the description of some of the classical philosophical problems like the mind-body dichotomy, the problem of perception, the nature of God, the knowledge of other minds, the nature of truth, etc., one can see how philosophers are caught in a situation in which they go round and round and from which no escape seems possible.

In such a state of affairs the only job which philosophy can perform is to cure conceptual illness. "The philosopher's treatment of a question is like the treatment of an illness" (Wittgenstein, 1953:Sec. 225). Thus philosophy, in Wittgenstein's view, is therapeutic in nature. We may recall here Wittgenstein's celebrated answer to the question 'What is your aim in Philosophy'?

"To show the fly the way out of the fly bottle" (Wittgenstein, 1953:Sec. 309).

This is further explained:

The clarity that we are aiming at is indeed complete clarity. But this simply means, that the philosophical problems should completely disappear (Wittgenstein, 1953:Sec. 133).

This leads us to the other two important questions, the roots of philosophical trouble and the method of removing them.

With regard to the first question (what is the source of philosophical perplexity) Wittgenstein's answer is: 'misconceptions about language'. One of the fatal misconceptions of the formalists, for example, is that they take language as determined by a system of exact rules like that of a calculus in mathematics. It is this notion which motivates them to think that it is possible to give a perfect and precise definition to the meaning of every word. They then try to discover these rules. But of course they fail to find them. The reason for this is obviously that, in ordinary discourse, words quite often do not have a precise, clear-cut meaning. Many words have several different meanings which depend on the context.

According to Wittgenstein's diagnosis it is the craving for generality or search for the essence, which is responsible for this mistaken view. We always try to extract certain common features from a class of individual objects. It is on the basis of these common features that we distinguish one class of things from another. For example, a group of animals on the basis of certain common features is called 'horse'. The commonness that exists here is described as the essence of 'horseness'.

In philosophy, particularly in the rationalist school, this craving for generality is regarded as characteristic of human reason. The idea of first principles is a clear demonstration of the philosophers' tendency to think that reason always seeks to discover some basic truths (i.e. the first principles) which can explain everything.

In science making generalizations is an indispensable tool for bringing the phenomena under systematic study. But in philosophy, Wittgenstein observes, such moves lead to the most unhappy results.

In our thinking about language we are highly influenced by this desire — the desire to make generalizations. This tendency is clearly reflected in our attempt to classify words and sentences in such a way that they could be assimilated within certain paradigms or models. But how does this model building lead to philosophical puzzlement? According to Wittgenstein, whenever we say something we first form a picture of that thing in our mind. We speak of several different things like, 'space', 'time', 'mind' and so on, but we speak of those things in terms of the pictures we have formed. On the basis of this generality i.e. certain grammatical similarities in language we form a picture of the mind as a ghostly kind of body (see, Wittgenstein, 1958:7).

A picture held us captive. And we could not get outside it, for it lay in our language and language seemed to repeat it to us inexorably (Wittgenstein, 1953:Sec. 115).

...Such hypotheses or pictures of the working of our mind are embodied in many of the forms of expressions of our everyday language (Wittgenstein, 1958:40).

The ordinary man does not bother about this picture-embodying feature of language. He does not care to think, what time is, or what mind is. These problem arise only for the philosopher alone. In his attempt to resolve these problems of time, mind and similar other mental words, the philosopher imposes on them his own interpretations, which are deviations from their normal use. For this reason Wittgenstein calls the philosopher a savage. He writes:

When we do philosophy we are like savages, primitive people, who hear the expressions of civilized men, put a false interpretation on them, and then draw the queerest conclusion from it (Wittgenstein, 1953:Sec. 194).

Wittgenstein holds language to be responsible for this and hence:

Philosophy is a battle against the bewitchment of our intelligence by means of language (Wittgenstein, 1953:Sec. 109).

and further:

Philosophy ... is a fight against the fascination which forms of expression exert upon us (Wittgenstein, 1958:27).

In the same line of thought Wittgenstein attacks the doctrine of essentialism, which is an important feature of traditional philosophy.

In the Investigations Wittgenstein attacks the whole idea of essence. Instead of it he gives the utmost importance to the notions of difference and multiplicity. On the basis of his examination of the individual cases to which a general term applies, Wittgenstein tries to show that such general terms do not constitute any common essence. He cites (Wittgenstein, 1953:Sec. 66), the famous example of games to demonstrate the impossibility of attributing any common character to a group of activities all of which we characterize as games.

The same is true with regard to different words and sentences which can be shown to have only family resemblances. While it is true that there is nothing like essence, Wittgenstein does not mean to say that everything is disconnected or that all general names are arbitrary. Looking at different games we find "a complicated network of similarities overlapping and criss-crossing" (vide, Wittgenstein, 1953:Sec. 66 and 67).

Rejecting the idea of a common essence Wittgenstein goes further and says that general terms do not have any unitary meaning. He rejects the view according to which there is one preeminent way in which words mean. As a matter of fact, he rejected his earlier view of meaning because he thought that it was a result of an obsession with a unified omniscient theory of meaning. It is because of this oversimplified image of the working of language, that the

basic task of a word is taken as the performance of specific functions like describing or, as in the Tractatus, picturing. Now if we take the word as it actually is, in all its multifariousness, we find that the function of language cannot be described in one specific mode. Language has various uses besides describing things, such as giving orders, expressing feelings, asking questions, making requests, etc. It is wrong to assume that there exists a common element in all these different functions of language; to look for this kind of residual essence of meaning is to falsify the real nature of language. In his later approach, Wittgenstein therefore adopted a piecemeal, ad hoc investigation of different kinds of problematic utterances. To sum up, for Wittgenstein, words get their meaning only within the context of language games which are 'forms of life', or 'modes of activity' governed by systems of rules.

From the various observations which Wittgenstein made about language such as, "philosophy is a battle against the bewitchment of our intelligence by means of language", (Wittgenstein, 1953:Sec. 109) or language "tempt(s) us to draw some misleading analogy" (Wittgenstein, 1958:48) one may think that Wittgenstein is suggesting the need for an improvement of ordinary language. But this is not so. The following passage clearly states Wittgenstein's position:

It is wrong to say that in philosophy we consider an ideal language as opposed to our ordinary one. For this makes it appear as though we thought we could improve on ordinary language. But ordinary language is all right (Wittgenstein, 1958:28).

Ordinary language is equipped with various distinctions.

The ordinary man is constantly using words like 'time', 'mind', 'know', etc. with perfect ease and without falling into any misunderstanding.

We have already said that philosophical puzzlement or perplexity can be removed only if we undertake a detailed examination of how words are actually used. Once we 'command a clear view' of the uses of words we realize that most of puzzles are due to our wrong and oversimplified view of the way in which language works.

The notion of use is one of the central notions in Investigations but it is at the same time the least clear notion. The most important reason that led Wittgenstein to identify meanings of words with their use is that any attempt to understand the meaning of words in isolation, in abstraction from the actual situation, including the meaning of the word 'meaning' itself, would be philosophically inadequate. To quote Wittgenstein:

The meaning of a word is what is explained by the explanation of the meaning, i.e. if you want to understand the use of the word 'meaning', look for what are called 'explanations of meaning' (Wittgenstein, 1953:Sec. 560).

Now, one may ask: "In which aspects of the use of words is Wittgenstein interested?" There is the grammatical aspect, the semantic aspect and the speech-act aspect of the use of words. Wittgenstein in his investigation into language has hardly shown any interest in the grammatical aspect of language. Except in a few places, we do not find any full length discussion on grammar in the Investigations. Wittgenstein was rather sceptical about grammar. In his attack against the craving for generality and essence, Wittgenstein has expressed the idea that the grammatical behaviour of words and the grammatical structure of sentences could be grossly misleading. Grammar leads philosophers to think of sentences performing certain fixed functions, so it is always better to avoid it. Although there are some passages in the Investigations which give the impression that Wittgenstein is vitally concerned with grammar, he is actually using the term grammar in a different sense. Thus, when he says:

Our investigation is therefore a grammatical one. Such an investigation sheds light on our problem by clearing misunderstanding away (Wittgenstein, 1953:Sec. 90).

the sense in which Wittgenstein is using the term 'grammar' should not be understood in the normal restricted sense in which we understand the term. What is meant here by 'grammar' is simply linguistic investigation i.e. the investigation

of the use of words. There is another well-known passage where Wittgenstein has distinguished between depth grammar and surface grammar:

In the use of words one might distinguish 'surface grammar' from 'depth grammar'. What immediately impresses itself upon us about the use of a word is the way it is used in the construction of the sentence, the part of its use — one might say — that can be taken in by the ear. And now compare the depth grammar, say of the word 'to mean', with what its surface grammar would lead us to suspect. No wonder we find it difficult to know our way about (Wittgenstein, 1953:Sec. 664).

Here by 'depth grammar' what Wittgenstein means is the 'explanation of the use' of a term. Thus in Wittgenstein's philosophy of language, the notion of meaning and the notion of grammar are tied to the concept of use.

The concept of use, in its turn, entails the notion of rule. For Wittgenstein learning a language means learning the rules for the use of words, i.e. learning the rules of the game. These rules are conventions which have to be obeyed by the members of a speech community. However, the very notion of rule raises some basic questions e.g., does the rule for the use of a word 'stand apart' from the use of the word? Must we understand the rule before we apply it?

Two things are involved here: first, there is the rule which governs the use of the word and, second, the actual use of the word according to a particular rule. Wittgenstein's suggestion is that to follow a rule is to use

the rule. In the pragmatic dimension, the rule and the use of the rule merge. And this is how we break the logical circle. For Wittgenstein, learning, knowing and understanding are all basically concerned with what we do. As he puts it, "The grammar of the word 'knows' is evidently closely related to that of 'can', 'is able to' (Wittgenstein, 1953:Sec. 150). In such a performance-oriented and operationalist framework, the correctness of a linguistic move would be decided on the basis of established conventions or the 'common behaviour of mankind'.

Attempts at practising ordinary language philosophy have continued not only on the Wittgensteinian model but also on what has come to be known as the Oxford model. A new trend was developed in ordinary language philosophy by the Oxford School under the leadership of philosophers such as Austin, Ryle, Strawson, Hampshire, Warnock and others.

The Oxford School not only broadens the conception of ordinary language philosophy but also makes some substantial changes in it. It however remains loyal to the idea that philosophy is an activity. The Wittgensteinian opposition to ideal and artificial languages persists and so also does the view that philosophy is basically concerned with the ordinary uses of words and expressions in a natural language.

The central thesis which Ryle (1949) arrives at on the basis of his analysis of the mentalistic terms is that the Cartesian idea of treating a person as consisting of a body and mind is a complete mistake. It is a mistake to think of mind as if it had an independent existence of its own, with its own history, performing actions and acquiring experience in the same way as a body has existence and history, performs actions and acquires experience. Mind is not an entity: it is merely a generic term for certain categories of behaviour, performance, disposition and so on.

The above short description is sufficient to show Ryle's commitment to a performance-oriented position. His treatment of various mental concepts, and his introducing of 'knowing how' and 'knowing that' clearly reflects this position.

Thus 'knowledge of grammar' means simply knowing how to do certain things e.g. reject certain sentences, mark the ambiguity of others, etc. Since linguistic knowledge is defined as a mere ability to act, what follows is that, (1) there is no reason to say that such knowledge is a feature of the mind; (2) it makes no sense to describe it as tacit, unconscious or innate, and (3) there is no reason to say that the rules and principles of grammar are in any way 'known' to the speakers. To ascribe the knowledge of the rules of grammar to the speakers is as absurd as to ascribe knowledge

of the law of gravity to stones. In such a linguistic framework, the talk of structure as independent of communication is seen as a result of the failure to distinguish between two different kinds of knowledge.

A different conception relating to the concept of meaning and function (or action) has been proposed by Austin, and further developed by Alston, Searle, Grice, and others. The primary consideration for Austin is to show that philosophers should take speech as the basic unit of study, not the word or the sentence, but the act which a person performs with the aid of words or sentences. The theory of language thus forms part of the theory of action. In other words, just as there are various acts performed in a game, in a marriage ceremony, or in building a house, so there are speech acts, such as stating, reporting, requesting and so on.

What Austin (1962) did in his programme was, first, to exhibit the variety of speech acts which can be performed with language, second, to lay down a framework for the assessment of speech acts and, finally, to reveal the different aspects of a speech act in order to avoid the misconception that performing a speech act means performing a single individual act. According to Austin, a failure to distinguish ^{between} these speech acts properly would lead to confusion. He therefore developed three-fold distinction

between what is called locutionary, illocutionary and perlocutionary acts involved in a total speech act.

The answer to the basic question: 'What is a person doing when he makes an utterance'? involves first the locutionary aspect of the speech act, which, in Austin's words:

... includes the utterance of certain noises, the utterance of certain words in a certain construction, and the utterance of them with a certain 'meaning' (Austin, 1962:94).

A second answer to the question: 'What was he doing when he uttered'? involves an answer like 'He was making a promise' or 'He was reporting something'. This is known as the illocutionary aspect of the utterance. Illocutionary act means performing an act (e.g. promising) in uttering certain words in a context. Austin describes an illocutionary act as the force with which a sentence was employed. Thirdly, the question 'What is a person doing when he makes an utterance' involves the perlocutionary aspect of the speech act:

Saying something will often, or even normally, produce certain consequential effects upon the feelings, thoughts, or actions of the audience, or of the speaker, or of others: ... we shall call the performance of an act of this kind, the performance of a perlocutionary act or perlocution (Austin, 1962:101).

According to this conception the meaning of a sentence can be specified by specifying the acts that can be performed by the production of instances under suitable conditions.

These acts (e.g. reporting, requesting, promising) are distinguished from the mere act of uttering a linguistic expression since these acts are meant to bring about some results to which the production of the utterance is a means, e.g. persuading, deceiving, frightening, etc.

We now want to make a few more observations on the relation between meaning and speech acts. The speech-act theory of meaning is a more developed version of the earlier view that meaning is use. The basic position of the speech-act theory of meaning is that meaning can be understood in terms of illocutionary acts, which reflects the Wittgensteinian concept of language. This can be seen from the following:

Meaning is a matter of convention. An expression is meaningful because of certain rules and conventions. Illocutions, as we have seen from Austin's description, are rules-and-conventions-governed, whereas perlocutions are not. A sentence can be used to produce any perlocutionary effect irrespective of convention. Illocutionary acts being defined as convention-governed acts throw light on the semantics of natural language which is claimed to be a convention-governed phenomenon.

Meaning is intimately connected with intending. That we often replace the word 'meaning' by the word 'intending' suggests that there is an intimate relationship between meaning and intending. This is shown by the fact

that we use meaningful expressions in order to communicate with others. Now in any act of communication it is required that the speaker must at least intend to produce a certain effect on the hearer, and also must intend that the hearer recognizes this intention (see e.g. Grice, 1957, 1969). For a speaker to succeed in this double intention it is necessary that he must use meaningful expressions; otherwise he would fail to produce any effect on the hearer. So there are two fundamental ways in which meaning and intentions are tied up; first, we use meaningful expressions with the sole purpose of carrying out our intentions to communicate and, second, for making our communication successful we employ only meaningful expressions by which the hearer will recognize our intentions.

Finally, we would like to make a few comments on one of the recent trends, viz. descriptive metaphysics developed by Strawson within the broader framework of ordinary language philosophy. Individuals, rather than being a deviation from ordinary language philosophy, is an extension of it. It has been extended in its scope and practised in depth by initiating the study of what Ayer calls 'the architectonic features of our conceptual system'.

At the very outset, Strawson made it clear that his break with ordinary language philosophy was by no means an absolute one. "Up to a point the reliance upon a close

examination of the actual use of words is the best, and indeed the only sure, way in philosophy" (Strawson, 1964:9). But beyond such a point it fails to be a sure guide since it cannot help the philosopher "as far as he wishes to go". The methodology which ordinary language philosophy provides is not "general enough and not far-reaching enough to meet the full metaphysical demand for understanding" (Strawson, 1964:10). "For when we ask how we use this or that expression, our answers, however revealing at a certain level, are apt to assume, and not to expose, those general elements of structure which the metaphysician wants revealed" (Strawson, 1964:10). Strawson contends that the philosopher must pass beyond that 'point' and seek to lay bare the most general features of our conceptual structure" (Strawson, 1964:9). This is what descriptive metaphysics is concerned with.

Now the question is what is the conceptual structure which Strawson hopes to 'lay bare'? According to Strawson, "there is a massive central core of human thinking which has no history" (Strawson, 1964:10) and it is this massive core which he hopes to lay bare. The categories and concepts which form the very basis of the structure of human thinking are "the commonplaces of the least refined thinking" as well as "the indispensable core of the conceptual equipment of the most sophisticated human beings" (Strawson, 1964:10). Thus the descriptive metaphysician in his task does not look

towards science since whatever could interest him in the scientist's thinking would be found in the ordinary discourse of the common man. Unlike the traditional metaphysician of the revisionist variety he is not interested in either inventing or correcting the structure of commonplace thinking. In fact, one can easily discover how Strawson has placed his entire programme in the broader framework of ordinary language philosophy from his attack against revisionary metaphysics. In his chapter on 'Material Bodies', 'Person' and 'Monad' Strawson criticizes at length the works of Descartes, Leibnitz, Berkeley and others which exemplify revisionary metaphysics on the ground that rather than describing the actual structure of our thought about the world they are concerned to 'produce the better structure'. On the other hand, he describes Aristotle's and Kant's work as exemplars of descriptive metaphysics. They are basically concerned with providing the actual structure of our thought about the world.

By now it must be clear that Strawson's descriptive metaphysics cannot be treated as one of the varieties of the conventional modes of Oxford analysis based on a piecemeal or item-by-item description of language. Strawson's appeal to the structure of human thinking as the indispensable core of conceptual equipment and his observation that there is a common human nature which is presupposed in our actions are

indeed quite suggestive and revealing. They mark his difference from the rest of the ordinary language philosophers who adopt a performance-oriented approach to language.

Strawson's approach in this respect bears some resemblance to that of Chomsky. However, these statements of Strawson do not conclusively prove anything. They are only tentative statements which at best indicate a shift of interest in the ordinary language philosophy itself.

Strawson's Individuals thus by no means indicates a departure from ordinary language philosophy. As a matter of fact, along with the other Oxford philosophers, Strawson's analysis is essentially based on the conceptual resources of ordinary language. In the introduction to his book Strawson said that the difference between descriptive metaphysics and the present conceptual analysis consists "only in scope and generality and not in mind or intention" (Strawson, 1964:9). Again the basic idea that language is communication is preserved all through. The conceptual structure which he talks of is, according to him, "the commonplaces of the least refined thinking". Strawson's fundamental assumption is that ordinary people employ the ordinary conceptual resources of mankind through the employment of ordinary language. It is on the basis of this idea that he tried to establish, for example, how the concept of 'person' was a primitive concept in our language. Language, for Strawson, serves as a common

point of reference in which "we act and act on each other and act in accordance with common human nature" (Strawson, 1964:112).

We end our exposition of ordinary language philosophy with Hampshire's observation which quite aptly summarizes the general trend of ordinary language philosophy:

But we do not in philosophy need to state what are the necessary and sufficient conditions for calling a signalling system a language; for we are not particularly concerned with defining the word 'language'. Nor are we concerned with a systematic classification of the different grammatical forms of language; the interest of contemporary philosophers in forms of speech neither is, nor should it be, scientific or systematic (Hampshire, 1966:358).

2

Structure or Communication? - An Evaluation of the Ordinary Language Approach

Ordinary language philosophy makes two central presuppositions: first, language can be defined solely as a communication system, i.e. is solely oriented towards communication intention, and second, the structure of language cannot be studied independently of its functions. This view of language directly contradicts the view according to which sentences are abstract objects and in which the concept of linguistic meaning is understood apart from its functions or communicative aspect. As Strawson formulates the issue:

Where the (two views) differ is as to the relations between meaning-determining rules of the language on the one hand, and the function of communication on the other: one party insists, and the other (apparently) refuses to allow, that the general nature of these rules can be understood only by reference to this function (Strawson, 1971:96).

Searle also thinks that the formalists' conception of abstract and linguistic meaning goes against the "common-sense picture of human language". For Searle:

The purpose of language is communication in much the same sense that the purpose of the heart is to pump blood. In both cases it is possible to study the structure independently of function but pointless and perverse to do so, since structure and function so obviously interact. We communicate primarily with other people, but also with ourselves, as when we talk or think in words to ourselves (quoted from Chomsky, 1976:55).

According to Searle the other competing view, because of its failure to note this communicative aspect and give due importance to structure, has failed to develop a proper theory of meaning. Of the opposing view, Searle has this to say:

... except for having such general purposes as the expression of human thoughts, language doesn't have any essential purpose, or if it does there is no interesting connection between its purpose and its structure. The syntactic structures of human languages are the products of innate features of the human mind, and they have no significant connection with communication, though of course, people do use them for, among other purposes, communication. The essential thing about languages, their defining trait is their structure (quoted from Chomsky, 1976:55).

For Searle, the greatest failure of the formal-structure theory e.g. Chomsky's theory, is its failure to see that

there is an intimate connection between language and communication, between meaning and the speech act.

Chomsky objects to Searle's contention. First, Chomsky denies Searle's claim that his theory does not make any connection between the structure of language and its purpose. He argues that he has always accepted that there exists a significant connection between the structure of language and its functions. As a matter of fact, along with the structural properties of language, he points out that he has always emphasized "creative use" as one of the essential functions of language.

Searle's other observation that any inquiry into the structure of language without considering its functions is "pointless and perverse" does not seem to be a valid one. In answer to Searle's objection Chomsky points out that adhering to Searle's own analogy of a physiologist studying the heart it could be said that the physiologist does not only study how the heart pumps blood but also studies the structure of the heart and the origin of the structure, independently of its functions. He does not explain the structure in functional terms since it is the structure which is the basis of these functions.

A similar situation exists in language. Chomsky refers to the structure-dependence of rules which is a general property of the rules of language. Structure-dependence,

according to Chomsky, is a predisposition of the mind since there is no conceivable way by which such principles can be learnt by the child or can be taught to the child by the adult. The methodological significance of this principle is that it shows the prima facie importance of structure in language.

Our main criticism against ordinary language philosophy is that any account of language which does not specify the structure of language is ipso facto inadequate. because it is on this structure that the generative principles which determine the syntactic and semantic features of language depend. These generative principles could be regarded as the foundational principles of language. They determine how each and every sentence of the language is structured and how sentences are understood. The ordinary language philosophers' failure to explicate this structure, which accounts for the compositional feature of language, leads them to think that philosophers have nothing to do with the study of sentences and sentential structure. Ryle (1961) has explicitly stated his position on this subject. Philosophical analysis of language, for Ryle, is in no way concerned with sentences, since sentences do not have uses and uses are what philosophers study. Ryle (1953) also argues that sentences do not belong to language but to speech. Such a standpoint does indeed seem to be peculiar in the sense that

one of the most significant features of language is its ability to make available to the speakers an infinite number of sentences from which he chooses the appropriate one. Thus linguistic competence does not constitute the ability of a speaker to imitate previously encountered sentences, but the ability to produce an infinite number of sentences including wholly novel ones. Chomsky has shown that any attempt to explain linguistic competence solely in terms of communicative function of language is bound to fail. He is struck by the fact that the normal use of language is "innovative", "potentially infinite in scope", "free from the control of detectable stimuli" and "appropriate to a situation" (see, Chomsky, 1968:10ff). Such linguistic ability of the speaker depends on the operation of certain mechanisms which are recursive in nature and thus not reducible to the properties of the lexicon of language. If learning a language means acquiring the ability to produce and understand any new sentence then such learning can only be explained as the assimilation of the recursive mechanism of language.

The generative ability of man which is exhibited in the transformation and alteration of linguistic expressions in innovative ways cannot be accounted for by communication alone. In order to account for the linguistic competence one has to see the irreducible generative structure of language which provides man - the speaking subject - cognitive freedom.

This is the basis of Chomsky's general thesis that there exists an innate predisposition for the acquisition of language. What linguistic competence means ^{is} a knowledge of the rules of a language whereas 'performance' is the actual linguistic behaviour in accordance with these rules. The speaker's ability to use his language correctly in a variety of socially determined situations presupposes the concept of competence or the speaker's intuitive knowledge of language. The ordinary language philosophers' failure to recognize this competence structure of language is due to their failure to see that there is an intrinsic relationship existing between the use of language and the knowledge of language. This intuitive knowledge of the speaker constitutes the very basis of language which exists as an institution for human communication. The ordinary language philosophers (such as Strawson) may characterize this intuitive knowledge as common human experience. But such knowledge as is characterized as mere common human experience a la Strawson is definitely not the same kind of linguistic competence which we are here referring to. If experience is seen as a framework, then a proper epistemological distinction has to be maintained between experience as framework and the things which are experienced within that framework, because, to understand the framework in terms of those things which fall within the framework is a circularity. In other words, one needs to make a

distinction between the spectacles and the world of objects which is seen through the spectacles. The positivists accept only the existence of the world of objects and thus they deny the existence of spectacles since one cannot see the spectacles which he is wearing. Strawson accepts the existence of spectacles but to accept its existence without making proper epistemological distinction leads to a position which is as vulnerable as the positivists'. Experience as framework presupposes a structure which is, to use Kant's phrase, transcendently deduced or reflectively discovered. Such structure is constituted with a deeper logic which can be characterized as a generative apriori type. An approach to language cannot ignore this constructional character of speaker's linguistic knowledge because it is the precondition of linguistic performance. In this conception we thus make an important distinction between the speaker's intuitive knowledge of the language and the theoretical description of it. This is an important methodological distinction whose implication has been elaborately brought out in the final chapter of our discussion on grammar and theory of language.

From the above discussion it follows that the speaker's ability to use words in an appropriate way constitutes his knowledge of the syntactic and the semantic structure of language; that is to say, it constitutes the organizing principles of language. This goes against the

contention of ordinary language philosophers who saw the development of language as a process of social influence upon the child, whether by reinforcement or conditioning. That the ordinary language philosophers' contention is false can be seen from their own programme.

The ordinary language philosopher's attempt to equate meaning with use is primarily meant to provide description and minute characterization of philosophically interesting words in a language. Such a programme may succeed in providing a detailed linguistic description of each philosophically interesting word but it cannot explain how new sentences are produced and understood in a language.

In order to explicate the compositional mechanism in language, it is not sufficient to characterize the meaning of words. We should be able to describe the function which determines the meaning of a sentence on the basis of the meaning of its components. Without making any reference to the syntactic and semantic structures of language it is not possible to solve the problem of novel utterances in a language since the meaning of a sentence, to a great extent, is determined by these structures.

The use-theory of meaning fails to explicate the compositional mechanism of language but the adherents of the theory claim that it is quite revealing at the lexical level. But, for a theory to be revealing at the lexical level

what is essentially required is that it must provide the basis for the assignment of semantic properties to lexical items. A theory is vacuous if it does not enable us to determine when two lexical items exhibit the same semantic properties and when they do not.

The full significance of the use-theory can be brought out if we compare it with some of the earlier theories of meaning which were criticized on the same ground of vacuity. Theories such as those based on the notions of 'real essence' and 'mental ideas' have been criticized by ordinary language philosophers themselves, on the ground that they do not provide any procedure by which one can determine when two expressions express the same mental ideas or denote the same real essence. Thus these theories are essentially vacuous or uninformative in character.

For a theory to be informative it must exhibit and explain the features and interrelations of the class of entities which the theory is about. In order to do this, it must satisfy two basic methodological requirements: first, it must contain a set of theoretical concepts which distinctly specify the properties and relations relevant for systematization and, second, it must contain a function which actually establishes this systematization process. This is the way in which theoretical concepts are connected with phenomena. A theory of meaning, to be adequate, must satisfy the same kind of methodological requirements.

The use-theory of meaning, because of its lack of a theoretical component, cannot systematically establish when two occurrences of a sentence instance the same speech act and when they are associated with two different speech acts. In order to explain such linguistic facts one needs to operate at the level of a theory because all these facts are to a great extent determined in the generative base of language. The speech-act approach (i.e. use-theory) to language is therefore bound to fail since it is confined only to the level of linguistic performance which cannot account for the generative structure of language. For this we require a richer grammatical theory which will explicate the structural details of language by making a proper characterization of syntactic and semantic properties of words and sentences.

A similar kind of difficulty has been found in Austin's analysis of performatives which should be considered methodologically as one of the variants of the use-theory of meaning. The basic point is that the logical force of an explicit performative and a performative verb cannot be properly explicated in terms of surface syntax. In order to achieve a proper explication of these semantic notions one needs to incorporate a great deal of grammar - the system which relates meaning and form.

We indicate here some of the difficulties which arise inevitably if performatives are seen only on the basis of the surface structure of language, i.e. language as used. For example, it was generally held that a single sentence is always associated with one and only one illocutionary force. But there are a large number of cases where this does not hold. A single sentence can be a conjunction of two or more clauses — each of which may have its own illocutionary force, e.g. "I promise to brush my teeth after eating fish and I demand that you do the same". Again, a single sentence can be ambiguous from the point of view of its illocutionary force. A sentence which has one illocutionary force can have a different force when uttered on another occasion. For example, sentences starting with explicit performatives are ambiguous between a performative sense and a constative or assertive sense. The sentence, "I bet the administration will embarrass itself" can on one occasion be an illocutionary act of betting and on another occasion it is an answer to the question "How do you make so much money"? The second case is not a case of betting but an assertion.

Difficulties of this sort can be accounted for at the deep structure of language. On the basis of the grammatical theory provided by Chomsky, a generative theory of speech act has already been developed in the recent times. Chomsky (1957) showed that transformational grammars include

optionally applicable transformations that account for various speech act types represented in the surface structure of language. Within this grammatical framework Katz and Postal (1964) modified the doctrine by introducing the meaning preserving transformations at the deep structure level. We should also mention the pioneering work of Ross (1970) in this connection. All these attempts convincingly show ~~the~~ the importance of underlying structure; i.e., logical representation of a sentence, is extremely important for understanding the performatives.

The ordinary language philosopher's programme, if evaluated against the background of this general requirement, does not seem to be better than the earlier theories based on the notion of real essence and mental idea. If the use-theory of meaning satisfies the above requirement it should be able to answer the questions like; "Under what conditions do two words have the same use?", "When do the uses of a pair of words differ?", "What determines when a word has more than one use?", "How is the use of a word distinguished from a misuse of that word?".

Ordinary language philosophers could reply to this by referring to the notion of the rules of language which according to them satisfy the requirement of their theory. They would, for example, explain that two expressions have the same use only when they are governed by the same rule.

This is indeed significant in the sense that the focus is on the structural regularities of language. But the ordinary language philosophers are extremely vague in their explication of the rules of language. It is true that they refer to rules of language but they have never defined the form and content of such rules. A proper characterization of what a rule of language is has never been made by any of the ordinary language philosophers except Searle. The others just offer a number of analogies for the characterization of the rules of language. A rule of language has thus been compared with the rule of a game, or a rule of logic, or a rule of a grammar or a moral imperative, etc. Thus the rule of a language is like a recipe. Here one faces the problem that there is no basis by which to tell which is the most appropriate analogy for the rules of language. To know this one needs to have a prior knowledge of the features of the rules of language, and of how they differ from other natural and conventional rules in important respects. An analogy cannot explicate itself. By itself it cannot answer why it is illuminating. For this we need a prior analysis of the nature of linguistic rules.

From the above it follows that there are two orders of language. The ordinary language philosophers' standpoint is vitiated by the early empiricist thinking which does not accept more than a single order of language. For them (e.g. Hume) only one kind of judgement about experience

is possible viz. synthetic judgements which are wholly derived from or wholly reducible to, the facts that they are about.

Kant questions such reductionism. According to Kant the basic problem is: "Can we explain the linguistic system in terms of the facts which the system organizes? For the empiricist, a synthetic judgement is completely reducible to facts in the sense that it is about what is spoken of. But according to Kant, a synthetic judgement or an informative use of language cannot be self-explanatory. In his appeal to experience the empiricist cannot just start with a tabula rasa but must start with a linguistic scheme in terms of which he orders experience. As Kant has shown, synthetic judgements alone cannot adequately order our experience. Essentially involved here is some kind of non-empirical or a priori element. This is what is known as synthetic a priori judgement in Kant's formulation. The term 'a priori' here indicates that which cannot be explained by the content of the informative judgement. The notion of the synthetic a priori could thus be viewed as a theory about that which is presupposed by, and which transcends the content of, what is communicated in a synthetic judgement.

Zeno Vendler (1967) characterizes rules of language in terms of its two correlates - the empirical and the a priori. A priori correlates are like postulates being only used for ordering linguistic data. It is because they do not

recognize this dual aspect of language, the empirical and the a priori (or the synthetic a priori) character of linguistic rules, that ordinary language philosophers think that the knowledge of language is simply a matter of 'knowing how.' Linguistic knowledge has thus been compared with knowing how to ride a bicycle, which can be regarded as an example of Ryle's 'knowing how.' Now if linguistic knowledge is analogous to knowing how to ride a bicycle, it is ridiculous to hold, as the ordinary language philosophers point out, that linguistic knowledge is a feature of the mind. Linguistic knowledge is then something which is learnt in terms of trial and error. Thus, there can be no reason for assuming an innate component in linguistic knowledge. The rules of language are in no way known to the speakers as opposed to the professional linguist whose job is to reveal those rules (Herman, 1969; Stich, 1971). If knowledge of language is only an instance of 'knowing how,' it is false to say that speakers know that the rules of grammar are such-and-such or that they are employing certain categories and forms.

But the analogy between the knowledge of language and knowing how to ride a bicycle does not hold. One learns how to ride a bicycle on the basis of his observation of how others do it, and the instructions which he receives from the others. We can explain someone's ability to ride a bicycle solely on the basis of the instructions he has received, the

observation he has made, and certain other physical precondition required for performing this operation. In any case, for explaining this ability we do not need to ascribe to the person the knowledge of the laws of mechanics. Linguistic competence, on the other hand, as Chomsky has shown, cannot be taken as the mere ability or skill achieved through instruction and observation. This is evident from the way a child acquires language. In the first place, the child was not shown how to produce or interpret sentences. Second, the child is competent to deal with sentences which he has never heard. So, unlike in the case of bicycle riding, there is a justification for holding the view that the native speaker has the intuitive knowledge of the rules of language. As Chomsky has said:

We do not attribute knowledge of mechanics to a bicycle rider if in fact this assumption does not help explain his ability to ride a bicycle: we do attribute knowledge of the rules of grammar to the speaker-hearer if this assumption does contribute to an explanation of his ability to use a language (Chomsky, 1969:154-155).

Linguistic competence implies that the native speaker has the intuitive knowledge of the rules of language prior to their application. It is in terms of a linguistic scheme that we understand linguistic data. This linguistic scheme is presupposed in the actual use of language. Husserl, for example, holds that the correct application of a word is understood at a level of consciousness (i.e. "the meaning-intention") which cannot be taken to be on a par with the

empirical levels (i.e., contexts or situations) at which the word is applied. The level of consciousness is a higher order level in which the idea of application is precipitated. In other words, the empirical understanding of meaning which is essentially understanding of the meaning of the words in terms of their use has its roots in an act of consciousness or the transcendental reflection of the knowing subject.

This shows that apart from the awareness of the physical sign, there exists a nonphysical or intellectual awareness whose function is to transform a sign into an expression. The ordinary language philosophers will agree on the question of the awareness of the physical sign but they are not prepared to accept that any intellectual awareness exists prior to the awareness of physical sign. We agree with the ordinary language philosophers' view that language is a conventional system of sign but this does not prove that a linguistic expression is nothing other than a sign or that understanding means the capacity to operate with signs according to certain conventions. We hold that a system of signs becomes a language only when it is assimilated with intellectual awareness. This mode of awareness can be characterized as Kant's a priori anticipation of experience and in that sense it is transcendental, i.e., nonreducible to the empirical. For Kant it is the synthetic capacity of understanding which makes communication possible. Human

mind actively organizes the data and structures the communication accordingly. Chomsky believes that there exists a structural similarity between the ordering and patterning function of the mind and the grammatical processes of any language. Thus almost echoing Kant, Chomsky says, "There are uniformities in what is learned that are in no way uniquely determined by the data itself. Consequently, these properties are attributed to the mind, as preconditions for experience" (Chomsky, 1966:65).

The greatest failure of ordinary language philosophers' approach is that they define language solely as communication. But this, as we have already seen, is only one side of the story. It is true that communicability is one of the main features of language but this does not constitute the whole of language. Language should be regarded as communication only at the level of performance where language is actually used. The ordinary language philosophers' failure is that their inquiry into the workings of language is solely based on how language is actually used and thus they remain at the level of performance. But to make a conceptual analysis on the sole basis of how language is used (i.e., linguistic performance) is bound to be inadequate because understanding of the nature of language cannot be complete without an understanding of its structure. In other words, for a proper explication

of linguistic use one needs to see the structural complexities of language which cannot be resolved in communication or performance.

Strawson, in his article Meaning, Truth and Communication, made a full length attempt to establish the primacy of the communication-intention theory of meaning. Strawson's attempt is to point out the central question; "Is the communication-function of language essential to the analysis of meaning i.e. to the explanation of 'the notion of truth conditions'?"

Strawson starts his analysis by accepting the notion "audience - directed belief - expressions (ADBE)" as the primitive notion. He explains the notion of ADBE in the following way:

... an utterer might have, as one of his intentions in executing his utterance, that of bringing his audience to think that he, the utterer, believes some proposition, say the proposition that p, and he might intend this intention to be wholly overt, to be clearly recognized by the audience (Strawson, 1971:96).

Since they are influenced by the instrumentalist view of language, which is that language is a means to certain ends, the communication theorists are more interested in the question of the possibility of successful communication rather than in the analysis of meaning. Their basic failure lies in thinking that communication is the only clue to the nature of language.

The formal theorists, on the other hand, hold that to make an assertion means to give expression to a belief, but they deny that the notion of asserting involves reference to audience-directed intentions. ADBE, for them, is not a logical compound of Audience-Direction (AD) and Belief-Expression (BE). Given the concept ADBE, it is not possible, the formalists would say, to have cases where we could think BE without AD. Thus BE is conceptually independent of ADBE.

Strawson's major argument against the formal theorists is that they presuppose an unanalyzed and inexplicated notion of expressing a belief. According to Strawson, "meaning-determining rules for a sentence of a language are the rules which determine what belief is conventionally articulated by one who in given contextual conditions utters the sentence..., determining what this belief is, is the same thing as determining what assertion is made". But the formalists' concept of 'belief-expression' ^{being} /essentially independent of AD, Strawson argued, needs clarification. It needs clarification because one cannot just stop here with the phrase 'belief-expression' without making any reference to communicative intention.

In the formalist theory it is a matter of contingent truth that the rules or conventions which determine the meanings of the sentences are social rules and conventions. This is just like a natural fact or a fact of nature which

cannot be regarded as something essential to language. According to this theory, people learn a language through which they can express beliefs, and "also acquire the secondary skill of communicating their belief". But this secondary skill, Strawson says is "simply something added on, an extra and conceptually uncovenanted benefit, quite incidental to the description of what it is to have mastered the meaning-rules of the language". Thus the rule of communication in the formalist theory remains secondary, derivative and conceptually inessential.

With these major observations, Strawson concludes that formal theory is "too perverse and arbitrary to satisfy the requirement of an acceptable theory". And hence, the communication theorists "must be allowed to have won (the game)".

The whole question of how communication is conceptually essential is begged throughout the discussion by Strawson. Strawson, Grice, Searle and other ordinary language philosophers approach the whole question from the viewpoint that language is consciously taught through the process of conditioning and training. In this way language is qualitatively different from other structures that develop in the organism by virtue of their essential nature. This shows that rather than entering into the investigation of the structural implication of language, the ordinary language

philosophers simply prejudge the issue, i.e. they decide that language is communication per se. But to prejudge the issue at the outset is methodologically objectionable.

Secondly, the communication theorists, must show how ADBE exhausts the notion of meaning. They should be able to show, for example, how ADBE explains why the statement P is meaningful even when produced without any intention other than honest self-expression. In general, what they require to do is to show how the reference to ADBE could account for the meaning of sentences. But clearly Strawson and others have failed in this attempt. They have failed because they do not realize the distinction (pointed out by Katz and Fodor (1963)) that exists between grammatical meaning or meaningfulness, which is a property of sentence type, on the one hand, and utterance meaning or significance, which is a property of the token or the utterance, on the other. Thus, in order to arrive at an adequate account of the meaning of a sentence, what is required is the theory of grammatical meaning as formulated, e.g. in the framework of transformational generative linguistics. Katz and Fodor were the first to develop a theory of semantics within the grammatical framework proposed by Chomsky. The main objective they set for their semantic theory was that a native speaker, on the basis of his semantic competence and his knowledge of the syntax of his language, is able to obtain the meanings of sentences which he has never encountered

before. This semantic competence is what has been earlier referred to as grammatical ^{meaning} / (meaningfulness), semantic performance is utterance meaning (significance). The distinction between these two can be brought out by the following examples. The sentence:

The humanist supervisor thinks that thesis work is
a philanthropy.

is a meaningful sentence i.e., it has a grammatical meaning in English whereas the token of the same sentence may not appear to be significant in a context where it has been uttered uncomprehendingly by a speaker, say, a small child. On the other hand a sentence, such as,

"Golf plays John"

is not a meaningful sentence in language but a token of this may be significant in the context in which it is uttered, e.g. it may be one of the sarcastic ways to describe the poor performance of John. This leads Katz and others to make a distinction between a grammar and a performance theory at the semantic level. Thus, Katz and Langendoen observed:

A grammar is a system of formal rules that provides a sound-meaning correlation in the language: it associates a grammatical meaning with each sentence type. A semantic performance theory is a system of rules that specifies how contextual factors interact with grammatical structure to determine an utterance meaning for each token of a sentence type: it concerns itself not with sentence type, but with their spatio-temporal tokens, and not with grammatical meaning but with utterance meaning. Thus, we may regard a semantic performance theory as a THEORY OF PRAGMATICS (Katz and Langendoen, 1976:10).

The ordinary language philosophers systematically ignore the distinction that exists between semantic competence and semantic performance. A correct methodological stand will be that which recognizes both the aspects. The communication theorists and the formalists adopt two diametrically opposed stands. They are led to such mutually incompatible positions because they ignore the basic point that any study of language must recognize both structure and communication. To deny one aspect in favour of the other leads to a methodologically untenable position.

Even among the communication theorists there are philosophers who realize the importance of the point. Searle, for example, while criticizing Grice's theory of meaning, argues for a position which does not seem to be very different from ours. Grice had said, "To say that a speaker meant something by X is to say S intended the utterances of X to produce some effects in a hearer by means of the recognition of this intention". Searle thinks that Grice's theory fails because "it does not show the connection between one's meaning something by what one says, and what, that which one says, actually means in the language". In his effort to revise Grice's theory, Searle introduces the notion of 'rule' for using expressions and broadens the notion of "effects produced in the hearer". These effects, he says, include "understanding of what I said". So for Searle, the meaning of

a sentence is determined by a set of rules through which the hearer knows that such and such a state of affairs is described by rule-following assertions. However, Searle (and for that matter any communication theorist) cannot systematically uphold this position because he is governed by the fixed belief that language is consciously taught through the process of conditioning and thus understanding of language implies understanding its function in communication. To use Searle's phrase, "communication is what language is about".

Continuing the same line of argument we would now like to examine the Wittgensteinian method of analyzing mental concepts as an example. We have said in our earlier discussion that mental words, like any other words, are understood in terms of language game. The word 'dream', for example, would be understood in terms of the corresponding language game in which the word 'drem'^u_A plays its role and also in terms of the language game of dream-telling. For Wittgenstein, it is the dream report which is extremely important since it is the waking testimony which constitutes the criterion which helps us to find out whether someone had dreams. The sceptics think of dream reports as a mere symptom whereas for Wittgenstein, a critical relationship exists between dream reporting and dreaming and once we can see this "the question whether the dreamer's memory deceives him when he reports the dream after waking cannot arise" Thus the rules

which formulate the criteria for the application of the word 'dream' determine the logical relationship existing between dreaming and dream reporting. The whole Wittgensteinian analysis, we will now show, is the outcome of a certain misleading conception of the relation between language and reality and thus, without going into the details of the argument, we will point out the incoherent nature of Wittgenstein's doctrine and will then try to present an alternative method of analysis.

According to Wittgenstein, there is no sense in making a statement, such as, "He had a dream last night but he has forgotten it", since there is no criteria by which to establish the truth of the sentence. This involves a counter-intuitive analysis of the concept of dream. In the first place, we point out that this conception of dreaming is not acceptable from the point of view of ordinary language itself. In ordinary language, it is perfectly sensible to say that I had a dream last night but I have forgotten it. If Wittgenstein is so faithful to ordinary language, then he must recognize what is considered as meaningful and what is considered as counterintuitive in ordinary language. Secondly, researches in neurophysiology disprove Wittgenstein's conception of dreaming. Through a study of the brain waves (EEG) it is possible to empirically verify the statement whether or not someone had a dream the previous night. In this

connection, we may refer to Malcolm's view (1962, 1967) which, on the basis of Wittgenstein's analysis, challenged the recent experimental evidence in physiology (e.g., Dement and Kleitman, 1957) which tried to measure the time span of a dream. Malcolm's argument was that in the language game played with 'dream' there is no criterion other than waking testimony by which one could determine how long dreams last. The scientists' attempt to answer: 'How long do dreams last?' is a result of conceptual confusion. In order to answer it one needs to adopt a criterion which ascribes some relevant properties to dreams. But to adopt a new criterion, according to Wittgenstein, means to change the concept viz. the concept of dream. The scientist's concept, strictly speaking, is not a concept of dream. The whole analysis goes altogether against the well-accepted definition of neuropsychological research.

Malcolm accepts that on the basis of the behavioural features expressed by the person during his sleep it is possible to say that the person concerned had a dream though he may not remember the dream after he wakes. But in such a situation, Malcolm holds, "our words have no clear sense". A question that can be immediately raised here is: what does it mean to say that these words do not have a clear sense? Malcolm does not provide any satisfactory answer to this. As a matter of fact, he later contradicts his own stand.

In his treatment of the concept of nightmare, he changes his earlier stand and holds that there is a sense of the term 'nightmare' where behaviour during sleep is the criterion. Malcolm thinks that there are different concepts of dreaming just as he maintains that there are different concepts of sleep, e.g., one based upon report and another upon non-verbal behaviour. But this is definitely a most unnatural way of characterizing the concepts of ordinary language.

Following Wittgenstein's and Malcolm's position that a dream report is the only criterion for dreaming, it is impossible to talk of children having dreams before they have learnt to speak. If, for them, words can be used only when their application can be strictly verified, then not only many of the ordinary uses would be left out but the non-linguistic thought will be ruled out too. They have overlooked the point that it is not impossible that a particular concept of mental activity may be modified and extended on the basis of further experience. The primary use of the word, 'dreaming', depends on the notion of dream-telling but this does not prevent us from extending the use of the word to include other criteria (see, Geach, 1967:3).

The reason for the counter-intuitive nature of the analysis is that it starts with a basic assumption that there must be a criterion. As we have seen in our discussion on criteria, according to Wittgenstein, X is the criterion

of Y only in the situation where the application of Y can be justified on the basis of the presence of X. Wittgenstein first of all has not given sufficient justification for his position. What we would like to argue is that the Wittgensteinian premise is not a self-evident one. There are plenty of instances particularly in the sciences, where Y exists independent of X. In other words, the meaning of Y can be taught without teaching that X is the basis of Y. If this is so, then X is not the criterion of Y. One such instance is Chihara and Fodor's example of Wilson Cloud Chamber in physics used for the detection of high speed charged particles. What is discovered through this instrument is that the formation of tiny bands of fog on the glass surface of the instrument indicates the existence of charged particles. But the formation of these streaks, as Chihara and Fodor comment :

... is not a Wittgensteinian criterion of the presence and motion of these particles in the apparatus. That one can detect these charged particles and determine their paths by means of such devices is surely not, by any stretch of the imagination, a conceptual truth. C.T.R. Wilson did not learn what "path of a charged particle" means by having the cloud-chamber explained to him: he discovered the method, and the discovery was contingent upon recognizing the empirical fact that ions could act as centers of condensation in a super-saturated vapour" (Chihara and Fodor, 1967:193).

In other words, the physicists explain the formation of the streaks on the basis of the hypothesis that "high velocity charged particle were passing through the chamber".

This example, is by no means, a special case. It is a generally accepted stand in the philosophy of science that scientists always approach the data with a set of hypotheses. Philosophers of science, such as Popper, Hempel, Hanson and others have shown that there cannot be any pure observation. Observation is always theory-laden. The theory at the initial stage might not necessarily enter in the form of a finished product. The problem, the terms of classification of data, and the notation, form the theoretical net work within which only observation or knowledge of a fact can take place. Hempel (1966) convincingly shows that observation statements are preceded by a hypothesis and that the former is logically dependent on the later. The hypothesis is not generated by any observation but is only offered as a suggestion in solving a problem. The evidence of this, i.e., how observation is determined by a theory can be found if one looks into the way in which different inquiries proceed by theorizing. This brings out the importance of a theoretical or conceptual framework in a knowing situation. We know the phenomena not in terms of criteria and symptoms but in terms of a theory.

This shows that the Wittgensteinian premise that X is the criterion of Y when the application of Y can be justified on the basis of the presence of X does not hold true in all cases. In other words, for such cases like the above, where Y "is the path of high velocity particle", X does not constitute

the criterion. The Wittgensteinian belief that there must be a criterion originates from a wrong philosophical theory of justification. Strawson (1967) also saw the inadequacy of Wittgenstein's position and denied the existence of necessary criterial relationship in human communication. "Wittgenstein here", as he said, "seems to me to be in a muddle What he has committed himself to is the view that one cannot sensibly be said to recognize or identify anything, unless one uses criteria; and, as a consequence of this, that one cannot recognize or identify sensations. But of course this is untrue" (Strawson, 1967:25). If we deny the necessary criterial relationship existing between concept and behaviour, then there are two major questions involved here. How do we explain the ordinary language mental terms? How do children learn these terms?

In learning the various mental terms we do not learn the criterial connection holding between the mental terms and the corresponding behavioural pattern. Instead we form complex conceptual connections by which we are able to make an interrelationship between various mental states. It is this conceptual system to which we appeal when we attempt to explain the behaviour of others by referring to belief, desire, motive, sensation etc. In other words, learning a language means developing a system of interrelated concepts which we use in order to understand and explain the

behaviour of others as well as our own. It is through the process of acquiring mental concepts that we develop a variety of beliefs involving them. These beliefs result in various expectations concerning how people are likely to behave. In other words, a common human understanding is presupposed in linguistic communication.

Language, if understood in the above sense, provides the clue to the understanding of human nature. It provides an insight into the structure of human nature. It shows that human nature is not an empty concept. The meaning of human nature implies certain distinctive capacities, faculties and activities. It is not only on the basis of this common human attribute that human beings act and communicate with each other, but they also share certain fundamental beliefs and deep-rooted human concerns. It is these beliefs and concerns that men must realize in order to achieve a truly human communication. Men need to understand each other, help each other and approach each other without falsehood and deception in order that successful communication may take place.

Apart from the incidental statement of Strawson (1964) which concedes the point about common human nature, ordinary language philosophers in general did not see that language has an essential relationship with human reality or Dasein. The inadequacy of the ordinary language philosophers'

analysis of mental words is largely due to their failure to see this essential relationship. The mental predicates which we use to account for behaviour can be looked upon as supplying evidence for the mental processes which we postulate. These mental processes are understood in terms of the conceptual system on the basis of the common human understanding. Human behaviour is like the cloud-chamber streaks in physics and the postulated conceptual system is like the physical theory where the properties of the particles are formulated and defined. Such a conceptual system is validated by the explanation it offers for the phenomena in question and may in fact lead to the discovery of other interesting phenomena hitherto concealed from observation.

In this connection we should mention that recent investigations in cognitive psychology show the important role that theory construction plays in everyday conceptualization and concept formation. Much of our everyday conceptualization involves manipulation of theories and explanatory models in terms of which experience is integrated and understood. We may, e.g., mention the works of Jean Piaget whose theory of the development of language and cognition is considered a landmark in this new area of research. Piaget shares the Gestalt conviction that humans structure the universe according to their innate perceptions and that the functional activity of reason is obviously connected with the general

heredity of the organism. This is what he calls "hereditary psychological reality" which is of primary importance for the development of the mental processes.

On the basis of his elaborate study of the development of physical concepts e.g. the concepts of object, time, space and causality in the child, Piaget (1954) has shown how knowledge is constructed by the individual. It is constructed both from the data of experience and from the data provided by the biological characteristics of the organism. This construction is done by the individual through the use of self-regulating mental mechanisms. The task of these mechanisms is to control the two basic functions: assimilation, which involves incorporation of experience into the existing mental structure, and accommodation, which involves the application of the existing structure to new experience.

Piaget's investigation indeed conforms to the rationalistic epistemology of Kant. Knowledge occurs through combining sense experience with the organizing activity of the mind. The role of experience is to activate the intellectual process. In this connection, we may refer to Chomsky's discussion (1976) of the act of naming. In naming situation there is always an interaction between the cognitive structure of language and the system of commonsense understanding, a name is always drawn from the system of language and the thing to which it is associated is chosen by the

category of commonsense understanding. Language includes various categories of personal names like, place names, colour names and so on. Chomsky refers to Moravcsik's (1975) article on the Aristotelian theory of language where he says that "there are no expressions that perform solely the task of referring. Individuals are given by certain privileged terms that specify domains of discourse". The domains of discourse are necessarily related with the categories of commonsense understanding. The act of naming is an interplay of the structures of the two systems which the mind may not be consciously aware of. In such a view names are not associated in an arbitrary way, nor are they the 'cluster terms' of Wittgenstein. Each name is placed in a definite linguistic category which enters in the system of grammar. Whenever an object is named, says Chomsky:

... the hearer brings to bear a system of linguistic structure to place the names and the system of conceptual relations and conditions, along with factual beliefs, to place the thing named. To understand "naming" we would have to understand these systems and the faculties of mind through which they arise (Chomsky, 1976:46).

This establishes the prima facie importance of the notion of structure in human communication.

We now address ourselves to the second question viz. how do children learn concepts e.g. mental predicates? It is possible for a child to learn the various mental words through various means other than learning the criterial

relationship. For example, if the concept of dreaming is defined as the inner event whose occurrence always causes some involuntary behaviour in our sleep and which is remembered when one correctly reports a dream, then definitely there are a number of ways other than criterial relationship by which a child could learn the word 'dream'. One of the most simple ways is that a child could learn the word by being told that what he has experienced is a dream. Another way may be that a child, because of his prior understanding of the meaning of words imagining and sleep, could learn what the word 'dream' means only when he was told that dreaming is like imagining in sleep.

It is not necessary that a child learns the meaning of the mental concepts only from his own case. A child with a fair amount of intelligence who does not have any experience of dreams can form an idea of a dream just on the basis of a set of theoretical inferences described above. If these characteristics constitute the concept of dreaming, then it is not impossible for a child to arrive at the notion without having any experience of dreaming. The same is true in the learning of sensation terms such as 'pain' and quasi-dispositional terms such as 'having a motive'. The child could learn those concepts by employing the inference pattern that is described to him.

The above position may be questioned on the ground that the suggested alternative does not seem to be a very plausible one. The children, in order to understand and use the various mental concepts, must acquire a complex conceptual system and for that they need to be taught this system. But such a teaching would be so complicated and difficult that it would virtually ^{be} impossible to gain much success in it.

If such a system cannot be taught, it follows from the ordinary language philosopher's own objection that there is something which is unlearned in the very structure of our conceptual system. These unlearned structural properties can be characterized as innate. In the recent discussion in the philosophy of science, it is found that philosophers have started questioning the empiricist foundation of knowledge. Charles Pierce (1957), while answering the question, "How was it that man was ever led to entertain a true theory"? accepts the existence of certain innate capacities of mind as the precondition for successful theory construction. According to Pierce, man's mind is endowed with an innate capacity to imagine a correct theory of some kind and this is a necessary prerequisite for the attainment of any knowledge on the part of any human being. Popper (1972), despite his positivistic attitude, has admitted some sort of theory or 'expectations' which inevitably precedes any observation making. As Popper said:

At every instant of our pre-scientific or scientific development we are living in the centre of what I usually call a 'horizon of expectations'. By this I mean the sum total of our expectations, whether these are subconscious or conscious, or perhaps even explicitly stated in some language. Animals and babies have also their various and different horizons of expectations though no doubt on a lower level of consciousness than, say, a scientist whose horizon of expectations consists to a considerable extent of linguistically formulated theories or hypotheses [In] all these cases the horizon of expectations plays the part of a frame of reference: only their setting in this frame confers meaning or significance on our experiences, actions and observations (Popper, 1972:345).

We hold that, in order to understand the conceptual system, children do not need to have any teaching of the sort the ordinary language philosophers regard as necessary. As evidence we cite the child's acquisition of language. Chomsky and his associates have shown that humans are born with an inner device of language acquisition, which predisposes a child to the rapid learning of any natural language. It is a remarkable fact in language learning that in a very short period of time and, on the basis of a relatively few utterances that he has heard, a child becomes a master of his language. He acquires the ability to produce and understand novel sentences. Such a linguistic ability, or competence, involves the use of a system of a highly abstract linguistic rules of considerable complexity and generality. The child is not taught any such rules. He intuitively knows these rules. A grammar, on this view, is a theory

about the speaker's intuitive knowledge of the linguistic rules. The knowledge of these linguistic rules is intuitively given. The native speaker necessarily knows which is a correct move in his language. The role of grammar is to explicate the speaker's intuitive knowledge of his language. It is to this question that we shall now turn in our final chapter.

CHAPTER IV

TRANSFORMATIONAL GENERATIVE GRAMMAR AND THEORY OF LANGUAGE

The basic premise from which we have started our investigation is that the philosophy of language must concern itself with the structure of language. The structure of natural language can best be understood in the form of a theory which exhibits the structural relations and complexities of natural language. It is only with the help of a systematic theory of language that we can successfully explain many of the entangled problems of conceptual analysis arising out of the so-called misleading and deceptive character of language.

In this perspective we have examined the two major contemporary approaches in the philosophy of language, viz. the ideal language approach and the ordinary language approach. Our main preoccupation has been to show how these two approaches are inherently incapable of providing well-motivated solutions to the major philosophical problems treated by them. The first approach is governed by the belief that language can best be understood as an articulated system with clearly formulated and explicitly stated rules, whereas the second one is governed by the belief that the best way to study language is to study the speech acts.

We have argued that the ideal language philosopher's attempt to improve natural language, or to replace it by artificial language failed, since it did not take into account the detailed and entangled geography of ordinary language. In their attempt to bring out the logically important features of natural language and to embody them in a 'logical syntax', the ideal language philosophers not only did damage to the idiom of natural language by oversimplifying the meaning of expressions, but also failed in their purpose of permitting only sensible discourse. By wielding the chop too strongly, they unwittingly cut out much that, in any view, qualifies to be sensible discourse (e.g. those involving value judgements) along with the metaphysical puzzles.

The ordinary language philosophers, on the other hand, hold that any attempt to theorize about the structure of a natural language is to adopt a very narrow and partial view of language. Language is an essentially human phenomenon which consists of important varieties of discourse with different functions and different ways of fulfilling them. Thus the ordinary language approach is solely concerned with a minute description of the use of English locutions without giving any attention to the theory or structure of language.

This functionalistic view of language ultimately leads to a kind of behaviourism according to which mental predicates can be replaced by behavioural predicates. This

means that for them there is nothing in the structure of language which cannot be acquired as inductive extrapolation from observed regularities in speech behaviour. Language is thus defined solely in terms of communication and meaning is defined in terms of rules of usage. Thus generative power of language, i.e. what can and cannot be said in language, is reduced to the matrix of language game. All these elements in ordinary language philosophy lead the ordinary language philosophers to deny the significance of the basic distinction between la langue and la parole or the distinction between the underlying system or structure and its manifestations in actual utterances. As a result of this belief, ordinary language philosophers concentrated their efforts on describing the details of language use and they thus accumulated a large number of particular facts about usage, but this massive collection failed to provide any principled insight into the nature of linguistic structure.

Both approaches rest on the fundamental assumption that natural languages are unstructured and unsystematic conglomerations of verbal behaviour. For philosophers of both persuasions the defect therefore lies with language. We on the other hand claim that the defect actually does not lie with language but with the way linguistic structure has been generally represented in recent linguistics.

This representation involves the classification of morphemes and morpheme-sequences into various categories on the basis of their functions in the actually appearing sentences (see, e.g., Harris, 1946). The insight provided by the rationalist grammatical tradition of the 17th century that the surface forms may hide relations of greater significance and complexity which could only be revealed at a deeper level was lost sight of during the 19th century with its restrictions of scientific constructs to observable entities and its generally anti-mentalistic tendencies. The Chomskian grammar recovers this insight in its claim that a true understanding of the nature of language can only come through proposed theories of language which are subjected to internal and external criteria of adequacy, since we have no direct access to the nature and structure of language. Preliminary attempts to propose such theories have had to face the fact that before a theory of language could at all be considered seriously, it must accept some very basic notions about language, e.g. its structure-dependence (Chomsky, 1975).

Linguistic theory concerns itself with the question whether there may be some more constraints of this kind which characterize a possible theory of language more narrowly. The labours of TG grammarians have more or less established the fact, if nothing beyond this, that relations

on the surface, and the categories determined by such relations, are an unreliable guide to the true nature of language, and this is shown by the fact^{that}/a theory based on such relations and categories fails to explain a variety of interesting observations about language acquisition, language learning, etc., apart from failing to account for the intuitive judgements of native speakers about the grammaticality, ambiguity, analyticity, and such other properties of sentences.

The crucial question which faces the philosopher of language in his encounter with the transformational generative account of the nature of language is the following: How does the view that language is structured in the particular way it is claimed to be by the TG theorists specifically bear upon and solve the problems which have frustrated the efforts of both ideal language and ordinary language philosophers? This is a substantive question to which no definite answer can be given just as yet. It is not our purpose in the present work to provide the answer, for we believe that before a definite answer to this question can even be attempted, much methodological rubble must be got out of the way, so that the philosopher of language can at least begin to see clearly the path which he is to travel and which we hope will eventually lead him to his goal of solving the philosophical problems.

One can, however, reasonably ask what the basis for this hope is, and what assurance the philosopher has that TGG will succeed where the others have failed. In other words, how does one know that there indeed is a path hidden under the rubble?

We shall attempt to answer this reasonable query. In the first place the failures of both ideal language and ordinary language philosophy have their lessons for us. If ideal language approach failed, it was because of its assumption that natural language was illogical and unstructured and that the answer could be found by substituting for it an artificially constructed language which would be fashioned to suit the demands of logical and structural well-formedness. Hence, we do not wish to make such an assumption. On the other hand, we also do not wish to make the assumption that all ills arise from the search for the essential structure of language and that 'use' is everything, for that too has failed. We are thus left with the possible assumption that language indeed is structured and logical, its structure and logic are irreproducible in any artificial system, that a scrutiny of use alone cannot lead us to this structure, and finally, as a consequence of all this, the assumption that to grasp the structure and logic of language, we must penetrate beneath the surface form of language revealed to us by use. For all these assumptions we have reasonable and

plausible evidence, part from support from important and weighty historical traditions of linguistic thought, which has been discussed amply at length in the writings of Chomsky (1966, 1968), Katz (1966, 1971) and others.

There is a second reason why one may believe that a path indeed lies hidden underneath the rubble. One can see the outline of this path if one starts by considering the well-recognized fact that thought and conceptualization is to a great extent dependent on language and "the limits of my language mean the limits of my world" (Wittgenstein, 1961:5.6). However, the task of discovering "the limits of my world" is dependent on the task of discovering "the limits of my language".. Those who draw the limits of language too narrowly and too hastily get involved in a Whorfian kind of linguistic relativism, and for them the limits of one's world also vary from one speech-community to another. TGG, on the other hand, pushes the limits of language to their farthest boundaries by seeking to define the notion of "a possible human language", and seeking those tools of grammar by which the notion can be made precise and relevant. What such a study must ultimately reveal are the basic and most essential features of language — features which must characterise every possible human language, i.e. the universals of language. Such features must then reveal the "logical form" of all human language which could then be related to the

structure of the mind, or in the positivistically inclined TG theory, of the human brain. In the process of discovering this common logical form of language, the linguist must also discover the differentia that set one language apart from another. The TG grammar, at least in one of its versions, tries to do this by identifying a common 'base', and a set of transformational rules. Exponents of TGG disagree as to the nature of the 'base', e.g. whether it is syntactic or semantic in nature, but whatever the outcome of their debate, the lesson for the philosopher of language must be clear. There is no reason to despair of the "amorphousness" and "illogicality" of natural language for that belongs only to the surface; nor is there anything to be gained by constructing artificial languages, for that would tell us little about ordinary language. On the other hand, concentrating on 'use' alone must perforce bind us to the relativity manifest in the surface forms of individual languages. Besides, solutions sought in this framework, even if found, must be true only of the language being studied at best, or of a fragment of the language whose use is being studied at worst. The compartmentalization of the philosophy of language into the ideal and ordinary language school had been largely a result of the inability of linguists and philosophers to resolve the issue of "the limits of my language and the limits of my world", i.e. the inability

to find a path through the tangle of linguistic relativity on the one hand and logical absolutes on the other. TGG, which resolves the tangle by accommodating both (Den Ouden, 1975) in its deep-surface organization of grammar, thus opens up the prospect of forward progress by freeing us from the conceptual enslevement of ideal language and ordinary language paradigms.

While we thus see a ray of hope for the philosophy of language, we cannot afford to be too optimistic about the prospects of the philosophy of language even with the promise held out by TG grammar in the form it is presented by Chomsky and his followers. The discouragement comes mainly from the positivistic ambitions of the exponents of TGG and their desire to import into their study the methodology of natural sciences. While this desire to keep up with the Joneses of natural science is understandable in a world so totally overwhelmed by its successes, one needs to examine the methodological claims of TG linguistics (as perhaps of various other social sciences too) with respect to their validity in the light of the nature of its subject matter, its value for specific spheres of human activity, and its total contribution to the advancement of man. Considered in this light, the value of transformational grammar, we argue, lies more in the contribution it makes to the understanding of the nature of language and its functioning, the

insights it gives into a speaker-hearers pretheoretical knowledge of his language rather than in the prediction it makes about linguistic behaviour to which its "scientific guarantee" (Lyons, 1970) is mainly supposed to apply. Our purpose is mainly to show how the methodology that TGG has chosen to adopt goes against the interpretation in which TGG is of foundational importance to the philosophy of language, and how TGG reinterpreted as a formalized framework for the explication of intuitively known rules can prove to be of fundamental importance to the philosophy of language. However, a survey of the literature relating to the 'empirical' claims of TGG also shows (see e.g. Derwing, 1974) that its positivist methodology and its claims to empirical validity continue to be the weakest and most vulnerable aspects of TGG. We shall not dwell on this question in the present work but shall turn to a fuller examination of the positivist framework adopted by TGG to be followed by a reinterpretation in the methodological framework of Geisteswissenschaften, alternatively also known as hermeneutic philosophy.

That the nature of what is to be described determines the nature of an adequate method or its description is now a commonplace view. A linguistic theory thus must start with an explicit statement of the conception of reality pertaining to its own domain on the one hand and of the conception of reality in general on the other. But this kind of gradation

of reality has been challenged by the particular school of philosophy of science represented by Popper, Nagel, Hempel and others. According to their view, there is no qualitative difference between different domains of reality, hence there is no difference between the methods of description. In other words, the view that is expressed is that there is unity of method, also called methodological monism.

The notion of a law of nature and of law-like uniformities occupies a central place in the positivist philosophy of science. The Hempel-Oppenheim model of explanation in this sense is typically positivistic. Explanation and prediction in this model are two structurally similar notions. In both cases, we deduce a sentence referring to a particular event from a whole, consisting of one or more sentences referring to general regularities and one or more sentences referring to particular events, called antecedent conditions. Predictions drawn from the sentences referring to regularities or universal hypotheses are tested in terms of logically independent evidence. That is to say, the relation between antecedent conditions and evidence is not logical but empirical, i.e. is based on observation. When a prediction turns out to be true, it confirms the statement of general regularity used in making the prediction. This model can be given the following schematic representation:

	L_1, L_2, \dots, L_r	General laws	Explanans
	C_1, C_2, \dots, C_K	Statement of antecedent condition	
Logical deduction	<hr/>		
	E	Description of the empirical phenomena to be described	Explanandum

C_1, C_2, \dots, C_K are regarded as statements expressing particular occurrences and are called antecedent conditions, while L_1, L_2, \dots, L_r are general laws, and E is the sentence which states what is being explained. Thus in this model $C_1, C_2, C_3, \dots, C_K$ and L_1, L_2, \dots, L_r jointly form the explanans of which E is the explanandum. What is claimed is that, E, the conclusion, must follow deductively from $C_1, C_2, C_3, \dots, C_K$ and L_1, L_2, \dots, L_r which together constitute the premise. Hempel proposed certain sets of logical conditions of adequacy which the model must satisfy:

- (i) the explanandum must be logically deducible from the explanans
- (ii) the explanans must contain certain general laws in order to derive the explanandum
- (iii) the explanans must have empirical content so that they are subject to confirmation or disconfirmation tests
- (iv) the explanans must be true.

Because of its reliance on laws and theoretical principles this model (known as the Deductive Nomological, or D-N model) is able to give a systematic account of scientific explanation and prediction. The claims made by the laws and the theoretical principles can be so extended that they will also cover the cases which remain to be examined.

The theorists of TGG adopted this framework for their model of grammar. Thus, Chomsky says:

A grammar of a particular language can be considered to be a complete scientific theory of a particular subject matter. Any interesting scientific theory will seek to relate observable events by formalizing general laws in terms of hypothetical constructs, and providing a demonstration that certain observable events follow as consequences of these laws. In a particular grammar, the observable events are that such and such is an utterance and the demonstration that this observable even is a consequence of the theory...consists in stating the structure of this predicated utterance on each linguistic level, and showing that this structure conforms to the grammatical rules or laws of the theory (Chomsky, 1955: Sec. 2.1).

Postal emphasizes that:

... the differences between the mentalistic subject matter of linguistics and that of, say, physics does not impose a logically different character on linguistic theories from that of physical theories, that is, does not impede the testing and confirmation of linguistic assertions as has sometimes been claimed
 A contramentalistic linguistics (Postal, 1966:154).

Similar statements can be found scattered widely in the writings of other linguists who have concerned themselves

with the methodological aspects of TG grammar.

In this chapter we shall try to do three things: First, we shall try to establish that TG explanations cannot be interpreted in the positivist model of explanation, because they radically differ from D-N explanations and are not empirically testable in the way in which descriptions or theories of natural sciences are. Secondly, we shall try to indicate what in our view is the true character of TG descriptions of language. TG descriptions, we shall argue, can be construed as being analogous to systems of logic. Finally, we shall try to show how the insights into language that TG descriptions provide can help the philosophers of language to adopt a fresh approach to the subject of his concern.

1

Explanations in TGG and the D-N Model

What do the covering laws of the D-N model explain? What is the nature of these explanations? How are these laws tested and verified? These are some of the questions which we must answer in the context of TGG to establish the point that TG explanations do not qualify as explanations of the D-N model.

The laws of the D-N model are concerned with the explanation of natural events or phenomena. "Metal expands when heated" is an example of such a law. The natural events or phenomena which it explains are the individual case of metal-heating resulting in expansion. If a TGG is to be interpreted as a law in such a definition, what must be the natural events or phenomena which it explains? Are they the individual utterances made possible by a language? The theory of TG explicitly excludes utterances from the study of grammar and includes them only in an overall theory of linguistic ability which has linguistic performance as a major component. It is admitted that study of the inter-connections between actual utterances and the grammar, which models the competence only, is still at a very elementary stage. Some critics of TGG hold that, given the particular kind of organization that the TG theory has, it will never advance beyond the elementary stage and argue that a fruitful theory of language must be based directly on linguistic behaviour (Derwing, 1974).

If, then, utterances are not the natural phenomena to be explained, what are? Chomsky sees them as the intuitive linguistic judgements of the ideal speaker-hearer, judgements which pertain to the grammaticality, meaningfulness, ambiguity, contradiction, analyticity, etc. of sentences in the language. As it is obvious that such judgements are

not events in the sense in which they are understood in the D-N model (i.e. do not have spatio-temporal coordinates) and are also subject to variation from individual to individual (see, e.g. Labov, 1975), their inclusion in the TG theory as events or natural phenomena to be explained must be set down to a metaphorical extension of the word 'events'. This is sufficiently clear from the quotation from Chomsky above, where we are asked to believe that "that such and such is an utterance" is an observable event of a language!

However, one could probably accept the metaphor Chomsky uses, if no further compromises were asked of him, but, as often happens with lies, one metaphor leads to another and we are soon enveloped in a thick mist of metaphor, making any sighting of reality impossible. For if intuitive judgements are events, what must be the nature of the statements which purport to "explain" these events? This is the second of our questions asked above. In the D-N model, such statements are statements of regularities, which, on the basis of the extensive confirmation they receive, are called "laws". However, the possibility of falsification is not ruled out and the law could cease to be a law in the stated form. Do intuitive judgements admit of falsification in the same sense? Chomsky insists that what the grammar describes are not "summaries of behaviour" or a description of regularities only (Chomsky, 1964a:576ff); they are rules

which describe the native speaker-hearer's knowledge of his language (Chomsky, 1965). As such, they are infalsifiable by definition. What is falsifiable, Chomsky will argue, is an individual 'candidate' grammar, so that the place of laws in the D-N model is taken by grammars. But that is precisely where the problem lies. Natural laws are falsifiable because they are descriptions of regularities, and a 'regularity' may be violated, but grammars, not being statements of regularities, are inviolable, as they also must be if they are descriptions of the speaker-hearer's knowledge. This leads us to the third of our questions. What can violate a grammar if it is already a description of knowledge? Anything that does not describe the knowledge correctly and accurately, is not a grammar. A grammar is thus by definition correct. It is another matter that it may not be the most elegant or economical grammar, for that is not the issue. No 'events', even if understood as intuitive judgements, can falsify, i.e. confirm or disconfirm, the grammar. What kind of 'law', then, is this grammar? Or are we being asked to assume a metaphorical understanding of the term 'law' as well?

TG Grammar as a System of Explications Analogous to Logic

In our view, the preoccupation of TGG with the native speaker-hearer's intuition judgements regarding the grammaticality, ambiguity, and such other features of sentences should basically be seen as a preoccupation with the notion of a 'correct' sentence and not with utterance-events in space and time. The difference is a significant one. The notion 'correct sentence' is a normative one, as shown by Itkonen (1975a, 1975b, 1976). A sentence is correct or incorrect in relation to a set of rules and not in relation to what people actually say or do not say. The rules decide when a sentence is correct or incorrect. The relation between the rules and the sentences (or non-sentences) of the language is a necessary one. In that sense, the rules cannot be falsified. A set of rules can be rejected as being not the set of rules ~~can be rejected as being not the set of rules~~ for a language when it is found that it does not distinguish between the sentences and non-sentences as native speakers do, but that does not falsify the rules; it only shows that the data are not pertinent. In other words, there is no clear notion of counter-example or counter-evidence which could make precise sense of falsifiability as in the case of natural sciences.

Any attempt to define correctness in terms of space and time will essentially mean reducing the question to whether it is possible to define correctness in terms of what one does as a matter of fact. That such a move is not permissible is generally accepted philosophically. The reason is that man, in contradistinction to inanimate things, can do anything according to his intention. He can say, for example, anything, correct or incorrect, and accordingly he can react also, normally or abnormally, to what is being said. Grammar, therefore, instead of investigating utterances and reactions to them investigates the normative linguistic knowledge, i.e. the knowledge of the rules which determines the correctness of sentences. It explicates the speaker's pre-systematic knowledge of language. According to this reconstructed position of TGG, there is an important methodological level where grammar as a synchronic description of language is similar to logic and is different from the natural or quasi-natural sciences.

What prevents the TG theorists from seeing the non-empirical nature of grammar is their failure to see the distinction between the native speaker-hearer's pre-theoretical knowledge of the rules of his language and the linguist's theoretical description of these rules. This failure in turn is a result of their desire to attribute psychological reality to grammar. The claim becomes

even stronger when the question of psychological reality is linked further with the neurological structure and the hope is expressed that some day the neurosciences will be able to reveal a brain structure which corresponds to the kinds of linguistic structure TGG has discovered. In other words, there may some day be a psychological reality corresponding to TG grammar!

What evidence do the TG theorists have for such strong claims? Work in psycholinguistics (e.g. Fodor and Garrett, 1966; Fodor, Bever and Garrett, 1974) has shown that very little evidence is forthcoming from experimental sources. The hope, however, continues to be nourished even more fervently by the followers of Chomsky. Excuses of the kind that the area of research involved is a very difficult one and that no simple solutions can be expected to emerge quickly continue to be offered, while progress remains at a standstill.

From the point of view of the philosophy of language, the question of the psychological reality of grammar, whatever its ultimate fate, is an irrelevant one. Once the necessary character of the rules of grammar is recognized, and it is seen that they cannot be falsified in the sense in which laws of natural sciences can, it becomes quite unimportant whether or not the rules are psychologically real. The question may continue to hold

importance for one whose goal is to construct an overall theory of linguistic ability, but for one with the limited purpose of gaining an insight into the nature of language, the question now belongs to a different order altogether. It is no more important than the question of the psychological reality of propositional logic or set theory. Experimental evidence from the behaviour of human beings can no more validate or invalidate the rules of grammar than it can the formulae of logic and mathematics.

The positivist ambitions of TG theorists are brought out very strikingly by their belief that the ontological referents of a grammatical theory are in every respect similar to the unobservable theoretical constructs of the natural sciences. But the analogy is wholly misplaced. Theoretical entities postulated in sciences have a distinct meaning. The reason behind postulating these unobservable theoretical entities is that they are indispensable for scientific explanation. The concept of *psi*-function, for example, is a theoretical entity which is meant to explain the probability distribution of electrons. If the upholders of TGG claim that their theoretical entities are like *psi*-function of quantum mechanics, then they must accept the methodological constraints accepted in the theory construction in science. The basic defect in their entire approach is that they first ascribe a fullfledged ontological status

to their theoretical entities and then claim explanatory importance for those entities. This is just the opposite of the procedure which is universally accepted in the hypothetico-deductive framework of science. The theoretical constructs of natural sciences have their empirical correlates in the immediate world of experience and observation: they do not lie in the inaccessible world of the mind, or in the neurologists' picture of the brain in 2500 A.D.

There is a philosophical difficulty too. If the unobservable theoretical entities of TGG are taken to be neural components in the brain, then a conflict occurs with their basic philosophical position, i.e. that of rationalism. TG linguists have all through opposed behaviourism and claimed themselves to be staunch rationalists. But if rationalism is interpreted in neurophysiological terms, it is difficult to see how TGG differs substantially from the behaviouristic models. Physicalism is considered to be one of the dominating features of behaviourism as understood in the modern times, particularly in the context of system theoretic approach and artificial intelligence. If TGG in its theoretical enterprise ultimately relies on the physicalistic interpretation, then the question we have asked becomes quite significant. In fact the kind of 'mentalism' which some TG theorists uphold is not very different from the functional theoretic approach to mind.

For example, Katz has this to say about the linguistic structure and brain:

The critical distinction is between an abstract, formal characterization of linguistic structure — the theory itself — and a physical system of some kind which instances this structure. Discovering what kind of a physical system in the human brain instantiates the representation of structure given by a linguistic theory is the task of the neurophysiologist. The linguist's task is to provide a theory which represents the structure that any physical system must possess if it is to be capable of linguistic communication as we know it (Katz, 1967:78).

Katz accepts, with Putnam (1961) and others, that theoretical-mental terms refer to a physical system which obeys the organic laws of the body. Thus mental structure is a functionally defined structure. But the functional characterization of mental faculties is totally incompatible with Katz's programme of rationalistic linguistics.

We should not forget that rationalism does not only have an independent epistemological position but it also suggests an ontology of its own. Rationalism presupposes an irreducible abstract cognitive structure which is presupposed in any human discourse. Such a structure is regarded as transcendental in the sense that it cannot be reduced to any empirical description. This was what Kant called transcendental logic which relates the formalism underlying logic and grammar to the structure of experienced reality. The positivists do not agree with Kant and thus

they reduced transcendental logic to "formal logic" or logic of science. One may question the merit of the positivist's programme but one cannot accuse the positivists of being inconsistent. Katz on the other hand, has led himself to an inconsistent position. On the one hand he argues for a position which is similar to the functional approach to the mind while ^{on} the other he accepts rationalism as his basic philosophical position.

Chomsky's rejection of behaviourism is associated with his rejection of structuralist-linguistics of the Bloomfieldian and post-Bloomfieldian variety. The transformationalists have not seen that the rejection of taxonomic linguistics does not necessarily imply a rejection of behaviourism. One can reject taxonomy and yet be a behaviourist. This is particularly true of Katz. A major failure of the transformationalists is that they did not examine critically the various methodological issues pertaining to mentalism and behaviourism. They started with a firm belief that the hypothetico-deductive model would ensure mentalism in linguistics, i.e. a rationalist theory of language. They did not realize that an uncritical acceptance of the H-D model could also commit them to the positivist philosophy of science.

We shall argue that TGG explanations cannot be understood in the same way in which explanations in natural sciences are. It follows that the method of natural sciences cannot be applied to the subject matter of linguistics. The reasons are basically epistemological. The main difference between linguistics and a natural science like physics is that they involve two different ways of knowing. That is to say, the way we know linguistic phenomena, which are part of social phenomena, is different from the way we know physical phenomena. The subject matters of the two inquiries are so different that the method of social science cannot be qualitatively continuous with the method of natural science. It was this methodological dichotomy that gave rise to the famous debate between explanation and understanding - erklären and verstehen, and the claims that the aim of natural science was to explain, whereas the aim of social or human science was to understand.

In the social scientific inquiry a prima facie distinction is made between human action on the one hand and mere bodily movement on the other. An action differs from mere bodily movements in that actions are intentional and rule-governed. That is to say, an action is performed with a view to achieving a particular purpose and it is performed in conformity to some rules. The intentional

matrix and the system of rules together constitute what von Wright (1971:7) called "the semantic dimension of human behaviour". This semantic dimension of human behaviour forms the basis of social scientific inquiry.

Human action therefore must be seen in the framework of an intentional structure of human consciousness which provides the clue to the understanding of the meaning of social acts performed by the actors, who live in a reality built out of their subjective interpretation. This approach, we should note, does not reduce meaning to a personal attitude. What it does is to emphasize the primacy of consciousness and subjective meaning as the fundamental prerequisites for interpreting social action. The most convincing and clear exposition of this standpoint is offered by Max Weber:

Sociology ... is a science which attempts the interpretive understanding of social action in order thereby to arrive at a causal explanation of its course and effects. In 'action' is included all human behaviour when and in so far as the acting individual attaches a subjective meaning to it. Action in this sense may be either overt or purely inward or subjective. Action is social in so far as, by virtue of the subjective meaning attached to it by the acting individual, it takes account of the behaviour of the others and is thereby oriented in its course (Weber, 1947:88).

These views can be broadly characterized as phenomenological. The term 'phenomenological' is used only to signify the meaning constitutive character of

social action. Phenomenology is concerned with the description of phenomena which are given to consciousness by the acts of intentionality. The concept of intentionality is to be understood in the context of perceptual acts which have a directional character, i.e. acts in which the intentions yield the objects. The nature of these objects is different from that of the objects of natural science. The objects of natural science are independent of the intending acts. Intentional objects on the other hand are necessarily connected with the act of intending. As a matter of fact, they are regarded as mere correlates of such intending acts. The difference in the nature of the objects treated by the two kinds of sciences naturally leads to a difference in their methods. The method applied to natural sciences is rooted in a theoretical system which itself can never be taken as an object of scientific inquiry, whereas in the social sciences a theoretical system can itself be an object of inquiry. Since social phenomena are intentional, their identity depends upon the concepts and self-understanding of the actors. So a social scientist, in order to explain a particular social behaviour, has to use the actor's framework. The reason for this is that the relationship between concepts and social phenomena is fundamentally different from the relationship between concepts and natural phenomena. In the natural sciences

the concepts are used only to describe and explain reality, whereas in social sciences concepts themselves partially constitute the reality we study. As Winch (1958:125) argued, something can be regarded as 'order' only when the actors already have the concept of order, such as. the concept of obedience, authority etc. In natural sciences the situation is different. A natural event like lightening is the same whether it is conceptualized as an expression of Zeus's anger or an atmospheric electrical discharge.

Thus in the social sciences concepts and actions have a structural relationship. Concepts determine the content of action. Thus Taylor (1972) argued that an action must necessarily presuppose a set of fundamental conceptualizations or basic assumptions regarding man, nature and society.¹ These conceptualizations can be characterized as 'constitutive meanings of a form of life' by which we analyze the meaning of a specific action of an individual as well as that of a group. Max Weber, for example, explained the type of behaviour typical of capitalists of 16th and 17th centuries by citing the set of religious beliefs, and

1. A social scientists' also in a similar way presupposes the same set of fundamental conceptualizations. Recently Amartya K. Sen (1977) in his Herbert Spencer lecture at Oxford has argued that a specific concept of man is ingrained in the very structure of model building in welfare economics. See also Majumdar (1976).

desires which caused the protestants to act in this manner.

From the above discussion it becomes evident that the meaningful character of human action is the basic theme of the social sciences. In order to study human behaviour as meaningful, we need to grasp the meaning expressed in speech and action and for this we must have an understanding of concepts, rules, conventions and beliefs which make a particular behaviour meaningful. This is what is known as the method of understanding or verstehen as the guiding methodological principle of social science. The word verstehen is primarily meant to imply first a definite mode of understanding associated with human behaviour only, and, second, it is concerned with interpretative understanding. Its classic statement is found in Max Weber according to whom the first and foremost preoccupation of a social scientist is to understand the meaning that acts have for the actors. The understanding that is involved here is called verstehen.

Alfred Schutz (1963) reconstructed Weber's definition. Schutz says that the common misunderstanding associated with the word verstehen can be removed if we distinguish the various levels at which the method operates. Thus Schutz has distinguished three such levels. Verstehen should according to Schutz, be understood, "as the experiential form of commonsense knowledge of human affairs...as

an epistemological problem and as a method peculiar to social sciences" (Schutz, 1963:240).

Verstehen at the initial stage is concerned with "the experiential form of common sense knowledge of human affairs". In the realm of common sense knowledge, we always interpret others' action in order to understand the actual meaning intended by the person concerned. Human beings are engaged in a constant search for meaning. They do this precisely because they want to understand the real basis of the overt behaviour. So verstehen at this level is a method used by the social actors in order to interpret the actions of their fellow beings.

At the next stage verstehen is regarded as the method of social science in the sense that it is mainly concerned with interpreting the typification of experiential world. We do not experience the world as a mere aggregate of objects. The experiential world is apprehended in terms of certain typified form. The social scientists construct the theoretical systems on the basis of this logic of typification as embedded in the matrix of common sense understanding and social life.

Verstehen is also regarded by Schutz as the form of conceptual analysis. At this level we depart from Schutz. In our present investigation the word verstehen has been used only in the above two senses.

For us, it is important to note the epistemological point concerning the limits of knowledge in observation and experimentation. There are cognitive situations in which understanding both precedes and transcends observation and experimentation. In other words, there is a large area of knowledge which is inaccessible to experimentation. Such knowledge is acquired through understanding.

We have distinguished two modes of knowing - knowledge through observation and knowledge through understanding. Knowledge through observation is more appropriate for physical phenomena, whereas knowledge through understanding is appropriate for social phenomena. The nature of the knowledge about physical phenomena is such that it is nomothetic. The reason that sentences referring to regularities in nature (i.e. universal hypotheses) invariably go beyond man's factual knowledge about regularities which have already been exhibited in nature. In other words, natural sciences seek to study the regularities in nature which are independent of man's knowledge.

In contrast to the notion of regularity in empirical sciences it is the notion of rule that is basic to the understanding of social phenomena.

The distinction between rule and regularity as Itkonen (1975a) has shown, is associated with the notions of normativity and non-normativity. Intentional behaviour

is normative and can be understood theoretically only. An instance of behaviour becomes meaningful (i.e., orderly) only with respect to some rules. In other words, rules and behaviour are interdependent concepts.

Another concept related to the concept of rule is the concept of a rule-sentence (Itkonen, 1975a:390). By a rule-sentence is meant a sentence through which a rule is expressed. One of the rules of the English language, to quote Itkonen's example, is that the definite article must be placed before the noun. The same rule is referred to by the corresponding rule-sentence - "In English the definite article is placed before the noun".

Now let us see what is involved in the notion of regularity. We have already mentioned that natural sciences are concerned with regularities. Regularities are taken in the sense of universal hypotheses like "All pieces of metal expand when heated". One of the chief features of such universal hypotheses is that they are falsified if counter instances are found to it. The hypothesis "All pieces of metal expand when heated" is falsified if a piece of metal is found which does not expand when it is heated. In contrast to this a rule-sentence is not falsified if a counter instance is found to it. A rule-sentence in English, such as, "The definite article precedes the noun" is not falsified even if we get a counter instance to it, such as

*"Man the came in". This utterance is considered to be incorrect but it by no means falsifies the corresponding rule-sentence; if anything, it confirms the rule-sentence. A rule-sentence defines the conditions under which the sentences of a language are correct. Its function is thus to determine the potentially infinite number of correct sentences of a language. The two notions, rule and correctness, are therefore inseparable from each other.

Itkonen points out other epistemological differences between statements of regularities and rules. The nature of the empirical hypotheses in natural sciences is such that they are never known to be true with absolute certainty. They never get conclusively confirmed; they are confirmed only to a higher or a lower degree of correctness. But in the case of rule-sentences, the question of degrees of correctness does not arise at all.

It is claimed in the philosophy of science that an existential hypothesis, such as, "There are unicorns", can be verified only on the basis of confirmatory evidence, but cannot be conclusively disconfirmed or falsified. In other words, what is said is that even though there may not be any unicorns found, this does ^{not} prove that there are none. Can we think of a similar existential statement with regard to rule-sentences in English? For example, we have a rule-sentence like, "In English there is a preposition 'blip'

which functions in the same way as the preposition 'on'" does. But that this is not a rule sentence of English is known to all the speakers of English language with absolute certainty. One cannot argue here that though we do not know such rule-sentences, this does not prove that such rule-sentences do not exist. We know for certain that such a rule-sentence does not exist for English and this knowledge is part of our knowing English. This is evident from the fact that any utterance like "The boy ... table" is at once rejected by us as not being a sentence of English.

Though rule-sentences, such as the above quoted rule-sentence of the English language, "In English the definite article precedes the noun", have a normative character, their normative character depends on their being descriptions of a language, i.e. they assert that a given rule-sentences is true of the language and its negation false. Unlike the regularities of nature they are not falsifiable on the basis of spatio-temporal data. That is to say, even if we were to accept Chomsky's metaphorical extension of 'events' to include the speaker's judgements about utterances, (see page 181 above) they would still not provide us with a way of falsifying the rule-sentences. Since, rule-sentences are infalsifiable in terms of space-time coordinates, they are, therefore, non-empirical according to the standard interpretation of the philosophy of science. Having shown

this, Itkonen goes on to raise the question: Are rule-sentences analytical, synthetic apriori, or meaningless? Itkonen's position is that they cannot be brought under any of these traditional categories. He correctly argues that from the nonempirical nature of rule-sentences one cannot make a straight-cut inference about the kind of nonempirical sentences they are. It is, however, possible to see certain similarities between the properties of rule-sentences and one of these categories and Itkonen is entirely correct in identifying this category as being that of the synthetic apriori (Itkonen, 1976:20).

Synthetic apriori knowledge is a result of interaction between two processes, the apriori and the synthetic, or the conceptual system and fact. Information about reality, which Hintikka (1973:234) calls "surface information," or the informative use of language, is synthetic whereas the conceptual element that is involved is apriori. Thus there is surface information on the one hand and conceptual structure on the other. The two are closely interacting with each other. We rely on a certain conceptual system in order to reach the reality. In other words, the knowledge of the conceptual system is indispensable for understanding as well as describing the reality.

Rule-sentences fit this description almost exactly. They carry clear information content, as, for example, in the

rule-sentence cited by Itkonen. But the rule-sentence is also necessarily true, an attribute it acquires by being part of an overall conceptual system. As Hintikka (1968: 640ff and 1973a:229) points out, the conceptual system is one which we ourselves create by virtue of the conceptualising ability of our mind, which we then use to understand reality.

As against this, the empiricist philosophers believe that synthetic judgements are wholly derived from, or reducible to, the facts of experience pertaining to them. They, however, do not answer Kant's argument. According to Kant, a synthetic judgement, or an informative use of language, cannot be self-explanatory. In its appeal to experience the empiricist cannot just start with a tabula rasa but has to start with a linguistic scheme in terms of which he orders experience. Synthetic judgement itself cannot adequately order our experience. 'A priori' indicates here the order which cannot be explained by the content of the informative judgement. The synthetic a priori judgement could thus be viewed as a theory about that order of language which transcends the order of the content of what is spoken of as information in a synthetic judgement. This interpretation of synthetic a priori knowledge is crucial to the understanding of our concept of intuitive necessity as embedded in the structure of the speaker's atheoretical knowledge of a language, which Chomsky has characterized as the speaker's competence structure.

Regularities are necessarily accompanied by physical events, whereas rules are accompanied by intentional actions¹. Thus in one case the method of gaining knowledge is observation, and in the other case it is understanding or verstehen. The basic fallacy in the positivist philosophy of science is that it ignores the prima facie distinction between action and event or understanding and observation. Thus, actions are reduced to events, and knowledge through understanding is claimed to be derivable from knowledge through observation. Such monistic view of reality is essentially lopsided. Human actions cannot be interpreted with reference to bodily movements. Actions can be interpreted only with reference to rules. In other words, it is the knowledge of rules which will determine which action is correct or incorrect. Thus to know a rule means to know which are the correct actions falling under it and such knowledge can be achieved only by understanding the standard of correctness involved in it. This is absent in the case of regularity. The question of correct-incorrect which is so basic to rule-action matrix is, on the contrary, irrelevant for the regularity-event matrix.

1. It may be interesting to note here the most baffling position held by Quine. On the basis of the fact that intentionality cannot be reduced to physicality Quine thinks that there is no need to pay any attention to the former notion (Cf. Quine, 1960:216-217). Our reply to this objection will be on the lines of Schutz: "Even an ideally refined behaviourism can...merely explain the behaviour of the observed, not of the observing behaviourist" (Schutz, 1961:54).

Rules cannot exist without being known. That is to say, the existence of rules implies our knowledge of them. Just as our action in order to be recognized as an action must be known to the one who is performing it, similarly a rule must be known to the one who is following it in order to be a rule. Thus, to know that a rule exists is to know that it exists qua rule, i.e. a standard by which actions are evaluated - correct or incorrect. Regularities, on the other hand, may exist independent of our knowledge of it (Itkonen, 1975a:376).

It is thus evident that knowledge of rules and knowledge of regularities are two different types of knowledge. Knowledge of rules can be called the agent's knowledge, while knowledge of regularity can be described as the observer's knowledge. Knowledge of rules is called the agent's knowledge because it is knowledge pertaining to one's own actions, either actual or possible. Such knowledge is to be contrasted with the observer's knowledge about physical phenomena. The basis of agent's knowledge is what is known as immanent reflection as contrasted with external observation. This means that instead of looking at the external world from outside what the agent does is to reflect on whatever he already knows.

We must now ask the question: What type of knowledge does the grammar of a language represent? Is it

knowledge of regularities or knowledge of rules? With their anti-empiricist bias, Chomsky and his followers have consistently argued that competence, which models a grammar, must be considered as knowledge of the rules of grammar. They have also consistently denied that grammar, conceived in this way, could at all be regarded as dealing with regularities, which have a purely descriptive character. As a result of their descriptive character, one can even detect regularities which may have no relevance whatsoever to an adequate grammar of the language. While this is an entirely acceptable characterization of the rules of grammar, the TG theorists show a curious unwillingness to accept the full consequences of his position, for while he admits that knowledge of grammar is knowledge of rules and not ^{of} regularities, he still talks of verification and falsification of rules as if they were empirical laws describing regularities. To understand this, one has of course to appreciate that for him the grammar is a theory of language which seeks to account for the native speaker's ability to make judgements of grammaticality, analyticity etc. This is what forces Chomsky to talk of judgements about utterances as observable events, which contribute to the falsification or confirmation of grammars.

Grammar, considered as a theory of language of this kind, fails to distinguish between a native speaker's

atheoretical knowledge of the rules and the linguist's theoretical formulation of those rules (Itkonen, 1975a:400). Atheoretical knowledge is a precondition for theoretical knowledge. It is on the basis of the native speaker's knowledge of correct sentences (atheoretical knowledge) that the linguists write the grammar of a language (theoretical knowledge). In this conception the speaker's linguistic competence (i.e. the intuitive knowledge of the rules of language) falls in the atheoretical knowledge. This atheoretical knowledge has a deeper epistemological significance. The atheoretical knowledge is constituted with the dichotomy of the actual and the possible. The actual is that which is empirically known or is understood in terms of observation. The possible, on the other hand, is that which is necessary for our knowledge of the actual. The necessity which it exercises is the apriori necessity and, thus, they are the transcendental precondition of knowledge. These two levels of knowledge, atheoretical and theoretical, are not two polar opposites. There is a constant mediation between these two levels of knowledge. The theoretical knowledge, which is, in a sense, the description of atheoretical knowledge, is not possible unless one has a sufficient understanding of the atheoretical rules of language. This two-level character of knowledge is the basis of the social or human sciences. As Schutz (1963:242) points out, the

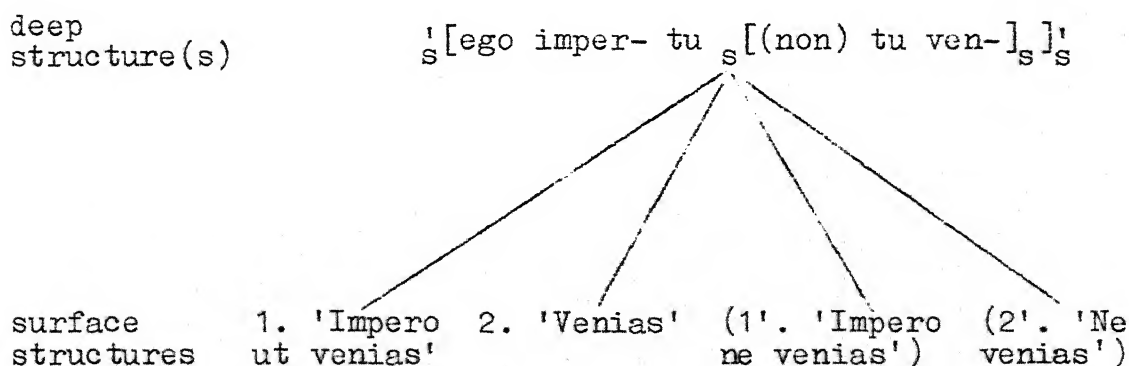
thought objects constructed by the social scientists on the basis of theoretical knowledge are the second-order constructs. That is to say, they are the "constructs of the constructs made by the actors in the social scene". The constructs of the first-degree are made by the agents and the constructs of the second degree are made by the social scientists in order to grasp the social reality.

In a grammatical investigation, the grammarian starts his analysis with the rules which make the sentences correct. In other words, he builds his own analyses, phonological, syntactic and semantic, by a set of rules. These analyses depend on his knowledge of the rules, i.e. of the correct sentence of the language. From his own knowledge he is able to see, for example, why the invented sentence, "It is easy to please John" is correct, while the sentence, "It is eager to please John" is incorrect.

It is the rules of language pertaining to such sentences that form the starting point of a grammatical description. The next phase in the grammatical description is to go beyond the initial sentences and to make generalizations which would account for an indefinite number of sentences. The various types of ambiguities exhibited in the surface structure of sentences can be explained on the basis of certain generalizations or hypotheses expressed in terms of definite types of deep structure and transformational

rules. We may cite here an instance of a theoretical generalization offered by George Lakoff. On the basis of Robin Lakoff's studies, G. Lakoff shows how the distribution of the subjunctive and the negative particles 'non' and 'ne' in Latin can be explained by postulating abstract predicates not appearing in the surface structure. Lakoff's claim is that if we postulate these predicates, we are able to express generalizations about certain sentence types which were otherwise unnoticed and unrevealed. As for example, it has been shown how the similarity in form and meaning between the sentences 'Impero ut venias' and 'Venias' on the one hand, and 'Impero ne venias' and 'Ne venias' on the other can be explained on the basis of a common deep structure from which both have been derived. This can be shown in the following way:

"I order you (not) to come":



the grammarian may fail to see the data properly, i.e. he may be mistaken about his own atheoretical knowledge.

Rule sentences, as Itkonen has shown, are normative. If I utter an incorrect sentence, such as, "Likes Rina mathematics", I violate a norm. The TG description however is not normative. The theoretical description offered by TGG for the atheoretical knowledge is not normative. The TGG rule for this is the auxilliary incorporation transformation which says that incorporation does not take place when the 'verbal' does not contain the feature [+copula]. This rule is used for the description of something which is normative to us, but the theoretical rule in itself is not normative.

What, then, is the nature of such theoretical rules? What is their function? We have tried to show that TG descriptions are basically concerned with the notion "correct sentence in the language L". In other words, they are concerned with the analysis of the intuitively known rules and rule-sentences relevant to the concept of correct sentence. A grammar is defined as a formal system whose function is to specify a set of sentences and to provide structural descriptions for each of them. It is only through such structural descriptions that we are able to show the grammatical relations exhibited in the sentences. An adequate transformational generative grammar is capable

of generating all grammatical sentences of a language, and those grammatical sentences alone. That is to say, on the basis of a finite set of rules it can generate an infinite set of sentences and assign structural descriptions to each of them. It is this finite system of rules which constitutes the basis of the recursive definition of the notion 'sentence of L' or 'grammatical structure of L'. A grammar G, is a generative device in which for each sentence there must exist at least one derivation which is considered as the terminal string in G. Secondly, a string of elements in the vocabulary of L, if it is not a sentence of L, then it does not have any derivation in G. The derivations themselves are like derivations in formal logic, in fact they are Extended Axiomatic Systems of some sort. As such their function is not very different from that of derivations in logic, viz. to provide explications for some intuitive notion. In logic the notions involved are those of a valid proposition, a valid formula, etc. whereas in grammar it is the notion of a correct sentence. The function of explication in both is to transform presystematic intuitive knowledge into theoretical knowledge.

Explication as a method of systematic analysis is used in the sciences and in philosophy in different forms. In philosophical analysis explication is considered to be the primary goal. It is characterized as the process of

analyzing a concept which has already been used in discourse of any kind. There are two components in explication, one is the intuitively known concept called explicandum, which is described in the corresponding explicandum expressions; the other is the replaced or reconstructed concept, i.e. the explicatum described in the corresponding explicatum expressions. Explication consists in changing the explicandum expressions of ordinary language into explicatum expressions of formal language. The explicandum expression is identified by the criterion of adequacy. The criterion of adequacy is constituted of those sentences which are known to be necessarily true and in which explicandum expressions occur as an essential feature. For example, Arthur Pap (1967:295) shows that in the explication of the concept of propositional knowledge the explicandum expression can be identified with the aid of the following sentence which is intuitively known to be necessarily true, i.e. if 'a' knows that 'p', then 'p' is true. The task of explication consists in transforming the intuitively known necessary truth into a formal kind which clearly exhibits the inner structure of the sentences.

If the new explicatum sentence is formally true, then it satisfies the criterion of adequacy. The important point to be noted in this connection is that the criterion of adequacy which is used for the purpose of identifying

the explicandum is now satisfied by the explicatum. In such a case, the explicandum and explicatum are similar.

When one is checking whether the explicatum satisfies its criterion, it can be said that one is engaged in testing the explicatum. It is obviously not empirical testing. Testing here means to see the consistency and the completeness of formalization.

The one which satisfies the criterion of adequacy best will be regarded as the best among the rival explicatum expression. As Itkonen demonstrates, a TG description can also be regarded as a method of explication where atheoretical (i.e. the presystematic or preanalytic) knowledge is the explicandum which is replaced by the explicatum — the theoretical knowledge. The explicandum here is the knowledge of a language *L* comprising a knowledge of the rules of correctness for sentences in *L*. The explicandum is identified with the help of the rule sentences, which, since they are intuitively known to be necessarily true, should be regarded as the criteria of adequacy. The explicatum in the linguistic explication on the other hand is the grammar of *L*. The grammar of *L* is the theoretical description of language.

The most important feature that distinguishes linguistic explication from other forms of explication, according to Itkonen, is that a grammar whose function is to

generate all and only correct sentences does not speak about sentences but it shows them, i.e. it makes derivations that show the structures of the sentences of L. Linguistic explication is therefore not synonymous with philosophical explication. In philosophical explication analysis is the goal of explication, whereas in TG explication analyticity is guaranteed at the outset.

Given the fact that the grammar of L is a formal system with axiom symbol 'S' and a set of rules for derivation, it is a necessary truth that a grammar of such type will generate such and such sentences having such and such structural descriptions. In logic the object linguistic modus ponens sentence of the form, ' $p(p \supset q) \supset q$ ' is analytically true, so also is the corresponding metalinguistic sentence 'q' which is derived from 'p' and ' $p \supset q$ '. In TG the sentence, $(NP \rightarrow \text{the } +N, N \rightarrow \text{man}) \rightarrow \text{the man}$, is, a formally necessary truth which is arrived at through a series of derivations. If this sentence is a formally necessary, true sentence, so also is the corresponding metalinguistic sentence, i.e. the grammar consists of the rules:

$R_1: NP \rightarrow \text{the } +N$

$R_2: N \rightarrow \text{girl},$

generates 'the girl'.

The standpoint represented above with regard to the nature of linguistic explication finds its support in the official interpretation of TGG. Thus, Chomsky in one of his earlier writings clearly stated the explicatory nature of a TG description:

...we assume intuitive knowledge of the grammatical sentences of English and ask what sort of grammar will be able to do the job of producing these in some effective and illuminating way. We thus face a familiar task of explication of some intuitive concept in this case, the concept "grammatical in English", and more generally, the concept "grammatical" (Chomsky, 1957:13).

We may cite here three cases of explication from Chomsky (1957:2-17 and 81-91). These three cases are the notions of 'grammatical sentence', 'ambiguous construction' and 'synonymous sentence'. The first one explicates grammaticality in terms of the formal property of generation in an optimal grammar. This explication corresponds with the intuitive idea of well formedness. A native speaker can thus recognize a distinction between the following two sentences:

Colourless green ideas sleep furiously

Furiously sleep ideas green colourless.

The second one explicates ambiguity in terms of the formal properties of the sentence. An ambiguous sentence presupposes nonequivalent derivations. Accordingly, the explication of an ambiguous sentence offers multiple structural descriptions of the same sentence. These multiple

structural descriptions correspond with multiple senses attached to the sentence by the speakers. Thus a native speaker can recognize the ambiguity of the following sentence.

Flying planes can be dangerous.

Correspondingly, two different structural descriptions are assigned to the sentence. The third one explicates synonymy in terms of the formal properties associated with the deep structure of the sentence. This explication shows that the different surface structures arise from the same deep structure. This corresponds with the native speaker's intuition of the sameness of meaning. Thus the native speaker can recognize that the following sentences have the same meaning

The boy hit the girl.

The girl was hit by the boy.

or,

The woman who was beautiful has died.

The beautiful woman has died.

The nature of TG explication can be appropriately characterized as axiomatization. Axiomatization, is a kind of systematization of existing knowledge. It is through the effort of systematization that new theoretical knowledge is born. In the context of linguistic explication the rule-sentences functioning as the criteria of adequacy are known to be true and thus they can be described as knowledge which is to be systematized.

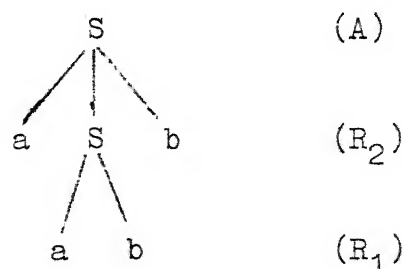
An axiomatic system consists of a set of axioms and a set of inference rules by means of which theorems are derived from axioms. Generative grammars, from type zero to type three, it has been shown, are subsumable under the general notion of axiomatic systems. We give an example of two axiomatic systems, one in the form of a rewriting notation and the other in the form of predicate calculus, generating the same set of theorems, i.e. all and only sentences of the type $a^n b^n$.

Axioms: S (A)

Rules of inference: $S \rightarrow ab$ (R_1)

$S \rightarrow asb$ (R_2)

Derivation of aabb



Axioms: $ab \in S$ (A1)

$(x)(x \in S) \rightarrow axb \in S$ (A2)

Rules of inference: Modus Ponens (MP)

Universal Instantiation (UI)

Derivation of aabb

1. $(x)(x \in S) \rightarrow axb \in S$ (A2)

2. $ab \in S \rightarrow aabb \in S$ (1, UI)

3. $ab \in S$ (A1)

4. $aabb \in S$ (2, 3, MP)

(Adopted from, Itkonen, (1975b:Figure 1).

The sentences generated by the grammar of a natural language do not refer to any particular domain of empirical reality which can be said to form the subject matter of linguistics. In contrast to this, particular types of regularities in physics actually form the subject matter of physics. The sentences with their meanings and presuppositions determine the subject matter of linguistics. Thus the purpose of grammar is to generate not true sentences but correct sentences as its theorems. The emphasis is shifted from the notion of true sentence to the notion of correct sentence and consequently the criterion for correctness lies in the sentence itself, not outside it. It is in this sense that the axiomatic system of a grammar does not speak about but shows its subject matter, i.e. the structure and the inter-relationships of the sentences of a given language.

Logic also has a similar character. Logic generates not just true sentences but valid sentences. Validity means valid for 'all possible worlds' which obviously does not have any reference to any external world. Consequently, the criterion for the validity of a sentence, similar to the criterion of correctness, lies in the sentence itself and not outside it. In both cases, axiomatization is self-referential. Furthermore, the purpose of axiom^aetization in both cases is to transcend the inevitable limits of intuition and to extend knowledge to all possible cases where intuition

is indistinct or unclear. The only difference between them lies in that where logic is concerned with the notion of a valid formula, grammar is concerned with the notion of a correct sentence. But in both cases the method of axiomatization is the same: both depend on our intuitive knowledge of the rules; both follow the same testing procedure for their axiomatizations. A grammar is tested on the basis of whether or not it succeeds in generating all and only the correct sentences of L along with the correct structural description. An axiomatic system of logic also has to satisfy the same kind of requirement. That is, a system needs to be both sound and complete. A system is sound if it generates only valid formulae and it is complete if it generates all the valid formulae. In both cases, a system, even if it is probably sound and complete, can still be tested by finding out whether the validity defined in the system corresponds in each case to the intuitive notion of validity.

To see axiomatization as part of the theoretical enterprise of grammar is by no means ^{to} suggest a Carnap-like programme of total formalization. As Chomsky (1956 and 1957:18ff) has pointed out that a formal system which is chosen as a grammar cannot be any arbitrary system. A formal system of a generative grammar must be based on the structural features of the natural language which it proposes to describe. Chomsky has shown that any arbitrarily chosen

formal system cannot generate all the sets of strings of a natural language e.g. a finite state Markov generator is inherently incapable of providing an adequate description of a natural language like English. The test for a generative grammar thus lies in the natural language it claims to describe and natural language, as we know, exists independent of the fact whether they are codified or not. Formal languages, on the other hand, exist solely by virtue of their grammatical rules. Hence there are no intuitions, no atheoretical rules of which they can be said to be formalizations. More than anything else, this shows the asocial character of formal language, as distinct from the social character of both logic and grammar.

Atheoretical knowledge is basic to any social scientific enquiry. This knowledge does not exist as something private to individuals, but is basically intersubjective in character. Social reality is constituted of various human institutions in which human beings are constantly interacting with each other. This forms what Husserl calls lebenswelt. Any systematic inquiry into the lebenswelt must be based on an understanding of this complex manifold of relationships. Theoretical knowledge is rooted in the intersubjective knowledge of everyday life. Philosophers as different as William James, Bergson, Dewey, Husserl and Whitehead have all accepted this intersubjective knowledge

as the basis for all theoretical inquiry. Husserl has, e.g., shown that it is this lebenswelt within which all scientific¹ and logical concepts originate.

The basis of atheoretical subjective knowledge, i.e., norm consciousness is the particular institution within which certain activities are performed according to rules. In linguistics, for example, we have seen that atheoretical subjective knowledge is the knowledge about our own linguistic activity, i.e., speaking, which follows certain rules. The speakers of a particular linguistic community by participating in the rule-governed activity acquire intuitive knowledge of language. TGG starts with this intuitive atheoretical knowledge of rules and formalizes it in terms of theoretical rules constituted in the sentence-generating device.

As Itkonen (1975a:430) points out, any institution can be characterized as constituted of three components - (i) a conceptual system, i.e. a rule-system, (ii) the intention of the agent and (iii) action. Concepts play a crucial role in defining the intention of action. Winch (1958:51ff)

1. According to Husserl, the concept of nature with which natural sciences are concerned are idealizing abstractions from lebenswelt. These idealizing abstractions, though they are concerned with non-human nature, are nevertheless made by man and can be brought under the purview of hermeneutic description. As Wittgenstein very aptly said, "Concepts lead us to make investigations: are the expressions of our interests (Wittgenstein, 1953:Sec. 570). As pointed out by Peter Winch, science in this sense is a social enterprise which follows its own rules. A similar idea, not on Winchian lines has been put forward by Kuhn (1962) and Feyerabend (1968).

even claims that concepts logically determine what we intend to do.

Language unmistakably has also this character. In other words, it is a core which is accessible to hermeneutic description. Language, like any other institution, has a conceptual structure. This conceptual structure is a rule structure which exemplifies itself in the linguistic activity performed by the speaker. Thus, one cannot deny the hermeneutic character of TGG. One in fact must recognize both the hermeneutic and the explicatory character of TGG. A TG description is an interpretation of the linguistic intuition or linguistic norm-consciousness of the speaker. Just as the social sciences are basically concerned with interpreting the concept of a correct action pertaining to different institutions (political, judicial, ethical, etc.), TGG is concerned with the concept of a correct sentence in a language L. The same is also true of philosophical analysis and logic. In both, ^{the} starting point of investigation is the intuitive understanding of relations of necessity (Cf. Pap, 1958:416). The primary concern of analytical philosophy is with the meaning of sentences. But before one can even proceed to analyse the meaning of sentences, one has to understand them as expressions of human intentions. The merit of the ordinary language approach in philosophy is that, unlike the purely formalistic and logistic approach to language, it

sees language as expressing these intuitive relations of necessity which, to use Wittgenstein's dictum, are embedded in language games rooted in the forms of life.

Logic, similarly, is developed with a view to formalizing our intuitive knowledge about rules for correct inferring and thinking. These together determine the concept of a valid formula, i.e. the concept of a valid formula is based on the intuitive, atheoretical knowledge of rules and their necessary character. What a logical system does is to give a formal definition of logical validity. Special methods, or decision procedures, are developed to test whether or not a formula is valid, e.g. in propositional logic and its modal or deontic extensions the method of truth value, or some analogous method is suggested as a decision procedure. In fact, the failure of deontic logic can be attributed to the fact that our intuitive understanding of normative relations cannot be delimited sharply in isolation from context.

3

TGG and the Philosopher of Language

Philosophy, being a system of conceptual analysis, is inextricably tied up with language. Philosophers of both ideal and ordinary language analysis have recognized this in

their own ways. In the earlier chapters we tried to bring out the limitations inherent in these two approaches and on that basis, we argued, that there is every need for taking a fresh look at the philosophy of language. All through our investigation we have upheld the view that there is a prima facie need to develop a theory of natural language which represents the structural complexities of language. We have also argued that TGG provides us with a theory of this kind and we have interpreted TGG as a system which explicates or axiomatizes our intuitive knowledge of language. It remains for us to show how this can help the philosopher of language to take a fresh approach to the problems of philosophy of language.

If the question of meaning is a question of what can and cannot be said in language, then a generative formalization of grammar does provide a foundation for philosophical explication. Historically, philosophers were the first to realize that the question of what can and cannot be said has to be seen in the light of some deeper rules of grammar. They found that there were sentences which did not reveal the true conceptual structure of the proposition contained in them when analysed in terms of traditional grammatical analysis. They immediately recognised the problem of logical form vs. grammatical form. In order to reveal the logical form, philosophers, such as Russell, Wittgenstein,

Carnap, Ryle, to mention only some notable examples, tried to develop a philosophical theory of logical form. For ordinary language philosophers, particularly for Wittgenstein and Ryle, the deeper rules were the rules of use, whereas the ideal language philosophers sought these rules in terms of formal rules of logic. Thus both the approaches failed to explicate the force of these deeper rules of natural language.

Linguistically, both the approaches start with the assumption that the taxonomic grammatical analysis is the last word in linguistics. As a result, they become either nontheoretical (as in the case of the ordinary language philosophers) or atheoretical (a position somewhat represented by Quine in his treatment of the explication of analyticity in terms of lexical definition) or super-theoretical as in the case of the ideal language philosophers who discard natural language in favour of formal language. None of them could see the possibility of developing a natural language theoretic approach to logical form. They could not see it because for them the only description of grammar in natural language was the taxonomic one.

TGG provides a conception of grammar that suggests an alternative to the philosophers' theory of logical form. It provides the philosophers with theoretical machinery that brings out the depth logic which underlies the complex realities of our ordinary use of words. For example,

Wittgenstein's famous sentence about hidden nonsense with its embedded question 'Have I got toothache?' can be analyzed with a high degree of precision on the basis of two kinds of underlying 'have' one of which disallows the question-transformation with 'I' as subject. Fillmore (1968) has shown that there can be two senses attached to 'have'. One is the possessive 'have' i.e.

1. I have the book.

the other is the functional 'have'

2. I have toothache.

The possessive 'have' is different from the functional 'have' in which the verb 'ache' is related to a deep dative ('I') and deep locative ('tooth') with 'have' whose function is to promote the dative to a subject position. Fillmore makes a distinction between the deep have of alienable possession (e.g. I have a book) and transformationally introduced functional pro-verb have of inalienable possession (e.g. I have an aching tooth). The point to be noted is that the sentence 'I have the book' is transformationally related to the sentence

The book is mine

and

Have I got the book?

Thus, one can meaningfully formulate a question sentence concerning a book embedded as complement of to know whereas

there cannot be any question about my toothache and a sentence like

'I don't know whether I have toothache'
is not permissible.

Similarly Zeno Vendler (1969) has shown how the logical force of a number of philosophically crucial concepts, such as, 'cause and make', 'effect and result', 'fact and event', 'good and yellow' can be clearly explicated in the TG framework.

In his discussion on 'Grammar of Goodness', Vendler pointed out that Moore's distinction between 'good' and 'yellow' is not based on a proper linguistic justification. On the basis of the grammatical behaviour of these two words, Vendler tried to account for Moore's basic intuition that there exists an intimate connection between a thing (or grammatical subject) and its colour, e.g. yellow, whereas a less intimate relationship exists between thing and its goodness.

Similarly, in 'Facts and Events', Vendler pointed out how Austin (cf. 'Unfair to Facts', 1961) had failed to recognize the difference that exists between facts and events. Austin assimilates facts to events because he thinks that the correctness of a linguistic move can be determined on the basis of 'what can be said' in a situation, e.g., the phrase 'Collapse of the Germans' in this sense is found to be

both a fact and an event. Using the framework provided by TGG, Vendler has shown that the Collapse of the Germans is an ambiguous phrase. In one case, the Collapse of the Germans is a fact, i.e. it can be unexpected or surprising, can be mentioned or denied. In another sense it is an event, i.e. it can be slow, fast, etc. The same sequence of words is used in order to characterize both the fact and the event. But from this, as Vendler has pointed out, one cannot conclude that some facts are events. Austin did this because he failed to notice the ambiguity involved in the sequence of words.

Katz has also shown how TGG can be fundamental to logico-philosophical inquiry. On the basis of the TG theoretic analysis, Katz has tried to reconstruct certain basic concepts of logic, such as, 'analyticity', 'contradiction', 'entailment' etc. (see, Katz, 1964, 1966, 1971, 1972, 1974, 1977). Katz's treatment of these problems has been questioned (see, Quine (1967), Putnam (1970), Bar-Hillel (1970), Linsky (1972) and others). It is possible that Katz may be wrong in the treatment of a specific problem but that does not undermine the methodological relevance of the problems he has tried to tackle. His main attempt was to provide a linguistic explication of the Kantian concept of analyticity. He tried to reconstruct the Kantian concept of analyticity within the TG framework, and approached the

problem from the point of view of distinction between surface-subject, surface-predicate and deep-subject, deep-predicate. Thus Katz's formulation of analyticity runs as follows:

S in analytic = df, the reading of the deep subject of S is a set of semantic markers that includes every semantic marker appearing in the reading for the deep predicate of S (Katz, 1971:

It is the semantic markers which represent the conceptual relation that can replace the unexplained Kantian notions, such as, 'concept containment', 'thinking through concept' etc. A sentence like, 'Bachelors are males' can be asserted to be analytic on the basis of a certain linguistic evidence. For a sentence to be analytic, what is required is that the grammar of English language must assign a semantically interpreted underlying phrase marker in which the deep-subject of the sentence will have the following reading:

♂ (Physical object) (Human) (Male) (Not married) (Adult)
and the deep-predicate will have the following reading:

(Male)

If the sentence satisfies such conditions then it is considered to be analytic.

Katz later on modified his position in order to incorporate many other aspects which were not dealt with in his original formulation of the theory. However, he has never basically changed his methodological approach.

Methodologically, Katz' approach can be said to be an attempt to show how the analytic-synthetic distinction can be established on the basis of a set of theoretical definitions. Quine failed to see that the notion of analyticity could also be defined on the basis of theoretical definitions as given in linguistic theory. The Quinean critique of Katz's analytic-synthetic distinction is based on three types of definitions¹, but it does not take into account the notion of analyticity as formulated in the theoretical definitions. The purpose of theoretical definitions is essentially to specify the structure of the concepts within the framework of a system of linguistic principles and they are constructed in such a way that they are able to explicate the speaker's atheoretical knowledge in a comprehensive way.

There is a growing trend among philosophers and linguists that they have started recognizing certain common areas of interest. Much of this convergence of interest took

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1. In Quine's approach it was maintained that the meaning of the term 'analyticity' can be given in terms of any of the following three definitions. (1) The first is concerned with lexical definition, the sole purpose of which is to provide the expression which is synonymous with the definiendum. (2) The second is concerned with what is known as explication, in which, though the original meaning of the definiendum is retained it improves the meaning of the definiendum to a certain extent. (3) The third is concerned with the notational definition whose purpose is only to provide a new type of notation, and thus, according to Quine, notational definition means introduction of a new convention for the purpose of abbreviation.

place in philosophical logic and linguistic semantics. One of the areas of such interdisciplinary research is the area which logicians describe as modal logic (in the wide sense of the word in which it includes, e.g. the logic of propositional attitude) and the behaviour of these modal terms in ordinary language. Lakoff, for example, on the basis of such cross-methodological approach tried to explicate what he called the 'natural logic' embedded in language (see, Lakoff, 1972). Similarly, McCawley, Seuren, Bach and others have drawn upon the logical notion of quantification in the analysis of the deep-structure of sentences.

The relevance of all these contemporary developments is that they show that there is a promising field of research which can be explored by an endeavour of philosophers and linguists; they also support our basic contention that TGG is a nonempirical or normative-theoretical enterprise like logic. Since philosophical problems are essentially problems of language, philosophy of language in this sense can be enriched by the linguist's search for a natural logic. Natural logic represents a convergence of two apparently conflicting interests, viz., the clarification of how ordinary language works and the formalization of logical rules of language. It is only in the framework of a non-empirical interpretation of TGG that such an endeavour can

become possible. Chomsky doubts¹ the feasibility of such an enterprize because he thinks of TGG as a natural science. For him there will always be a methodological barrier between TGG and a conceptual inquiry like philosophy. Although this whole area of research is notoriously complex, and many of its aspects and their associated implications are vague, nevertheless, such an attempt can give an entirely new direction to the philosophy of language. What we have at present can at best be regarded as a promising beginning. In conclusion we may refer to one of the most prophetic passages of Austin in which he foresaw the possibility of such an endeavour:

There are constant references in contemporary philosophy, which notoriously is concerned with language, to a 'logical grammar' and a 'logical syntax' as though these were things distinct from ordinary grammarian's grammar and syntax: and certainly they do seem, whatever exactly they may be, different from traditional grammar. But grammar today is itself in a state of flux; for fifty years or more it has been questioned on all hands and counts whether what Dionysius Thrax once thought was the truth about Greek is the truth and the whole truth about all language and all languages. Do we know, then, that there will prove to be any ultimate boundary between 'logical grammar' and a revised and enlarged Grammar? In the history of

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1. "I have mentioned the possibility that insights developed in the course of philosophical analysis might be relevant to the study of a central part of linguistic theory, and that concepts of linguistics might be useful to the philosophers in his work. Nevertheless, it seems to me that one should not expect too much from an interchange of this sort...." (Chomsky, 1968:164).

human inquiry, philosophy has the place of the initial central sun, seminal and tumultuous: from time to time it throws off some portion of itself to take station as a science, a planet, cool and well regulated, progressing steadily towards a distant final state. This happened long ago at the birth of mathematics, and again at the birth of physics: only in the last century we have witnessed the same process once again, slow and at the time almost imperceptible, in the birth of the science of mathematical logic, through the joint labours of philosophers and mathematicians is it not possible that the next century may see the birth, through the joint labours of philosophers, grammarians, and numerous other students of language, of a true and comprehensive science of language? Then we shall have rid ourselves of one more part of philosophy (there will be plenty left) in the only way we ever can get rid of philosophy, by kicking it upstairs. (Austin, 1961:180).

We are not interested here in judging whether a part of philosophy has indeed been "kicked upstairs"; what interests us is to note that as early as 1956¹ Austin had seen the importance of the inseparable connection between the philosophy of language and the theory of grammar. Austin's suggestion is a constructive one. It makes the philosophers aware of the possible changes that grammar may bring about in the philosophy of language. In this sense, this passage indirectly suggests the need for developing the philosophy of language in a new direction. In this work, we have tried to

1. Chomsky's first major work Syntactic Structures which was considered to be the starting point of modern linguistics was published in 1957.

suggest that TGG is perhaps just the kind of theory of grammar Austin was thinking of, and that the new direction for the philosophy of language that he envisaged was the one TGG is likely to give to it in the coming years.

BIBLIOGRAPHY

- Adison, J., L. Henkin and A. Tarski (1965) Proceedings of the international symposium on the Theory of Models, Barkley (1963). Studies in Logic and the Foundations of Mathematics, Amsterdam: North-Holland Publishing Co.
- Alston, W. (1963) 'Meaning and use', Philosophical Quarterly.
- Alston, W. (1967) 'Philosophy of language' in P. Edwards, ed., The Encyclopedia of Philosophy, New York: Macmillan Co. and The Free Press, Vol. 4.
- Anderson, S. (1971) 'On the role of deep structure in semantic interpretation', Foundations of Language.
- Armstrong, D. (1971) 'Meaning and communication', Philosophical Review.
- Atherton, M. and R. Schwartz (1974) 'Linguistic innateness and its evidence', Journal of Philosophy.
- Austin, J. (1961) 'Philosophical Papers', Oxford: At the Clarendon Press.
- Austin, J. (1962) 'How to Do Things with Words', Cambridge Mass: Harvard University Press.
- Bach, E. and R. Harms, eds. (1968) 'Universals in Linguistic Theory', New York: Holt, Rinehart and Winston.
- Bar-Hillel, Y. (1946) 'Analysis of "Correct Language"', Mind.
- Bar-Hillel, Y. (1963) 'Remark on Carnap's logical syntax of language', in Schilpp (1963).
- Bar-Hillel (1967) 'Dictionaries and meaning rules', Foundations of Languages.
- Bar-Hillel, Y. (1970) 'Aspects of Language', The Magnes Press, The Hebrew University Press.
- Bergmann, G. (1964) 'Logic and Reality', Madison: University of Wisconsin Press.
- Bergmann, G. (1960) 'Meaning and Existence', Madison: University of Wisconsin Press.

- Beth, W. (1963) 'Carnap's views on the advantages of constructed systems over natural languages in the philosophy of science', in Schlipp (1963).
- Bierwisch, M. (1967) 'Some semantic universals of common adjectivals', Foundations of Language.
- Bierwisch, M. (1969) 'On certain problems of semantic representation', Foundations of Language.
- Bloomfield, L. (1933) Language, New York: Holt, Rinehart and Winston.
- Bolinger, D. (1965) 'The atomization of meaning', Language.
- Carnap, R. (1937) The Logical Syntax of Language, London: Routledge and Kegan Paul.
- Carnap, R. (1942) Introduction to Semantics, Cambridge, Mass: Herbard University Press.
- Carnap, R. (1956) Meaning and Necessity, Chicago: University of Chicago Press.
- Carnap, R. (1962) The Logical Foundations of Probability, Chicago: University of Chicago Press.
- Carnap, R. (1958) Introduction to Symbolic Logic, New York: Dover Press.
- Carnap, R. (1963) 'Carnap's intellectual autobiography', in Schlipp (1963).
- Carnap, R. (1964) 'Foundations of logic and mathematics', in Fodor and Katz (1969).
- Cavell, S. (1953) 'Must we mean what we say?' Inquiry.
- Cavell, S. (1962) 'The availability of Wittgenstein's later philosophy', Philosophical Review.
- Chihara, S. and Fodor, J. (1967) 'Operationalism and ordinary language: A critique of Wittgenstein' in Morick (1967).
- Chomsky, N. (1965) Aspects of the Theory of Syntax, Cambridge, Mass: M.I.T. Press.
- Chomsky, N. (1957) Syntactic Structures, The Hague: Mouton & Co.

- Chomsky, N. (1951) "On the notion, 'rule of grammar'," American Mathematical Society.
- Chomsky, N. (1955) 'Logical structure of linguistic theory', Mimeographed.
- Chomsky, N. (1956) 'Three models for the description of language', I.R.E. Transactions on Information Theory, Vol. IT-2.
- Chomsky, N. (1964a) Review of B.F. Skinner's Verbal Behaviour, in Fodor and Katz (1964).
- Chomsky, N. (1964b) Current Issues in Linguistic Theory, The Hague: Mouton & Co.
- Chomsky, N. (1966) Cartesian Linguistics, New York: Harper & Row.
- Chomsky, N. (1968) Language and Mind, New York: Harcourt Brace.
- Chomsky, N. (1969a) 'Quine's empirical assumptions', in Davidson and Hintikka (1969).
- Chomsky, N. (1969b) 'Linguistics and philosophy', in Hook (1969).
- Chomsky, N. (1971) Problems of Knowledge and Freedom, New York: Pantheon Books.
- Chomsky, N. (1976) Reflections on Language, Fontana/Collins.
- Church, A. (1951) 'The need for abstract entities in semantic analysis', Proceedings of the American Academy of Arts and Science.
- Cohen, J. (1966) The Diversity of Meaning, London: Methuen & Co.
- Cohen, J. (1970) 'Some applications of inductive logic to the theory of language', American Philosophical Quarterly.
- Cooper, D. (1972) 'Innateness: Old and new', Philosophical Review.

- Davidson, D. and J. Hintikka, eds. (1969) Words and Objections: Essays on the Work of W.V. Quine, Dordrecht: Reidel Publishing Co.
- Den Ouden, B. (1975) Language and Creativity, The Peter De Ridder Press.
- Derwing, B. (1974) Transformational Grammar as a Theory of Language Acquisition: A Study in the Empirical, Conceptual and Methodological Foundations of Contemporary Linguistics, Cambridge at the University Press.
- Dummett, M. (1973) Frege: Philosophy of Language, London: Duckworth & Co.
- Feigl, H. (1964) 'Some major issues and development in the philosophy of science and logical positivism' in H. Feigl and M. Scriven, eds., Minnesota Studies in the Philosophy of Science, Vol. 1, University of Minnesota Press.
- Feyerabend, P. (1968) 'How to be a good empiricist', in P. Midditch, ed., Philosophy of Science, London: Oxford University Press.
- Fillmore, C. and D. Langendoen (1971) Studies in Linguistic Semantics, New York: Holt, Rinehart & Winston.
- Fillmore, C. (1968) 'The case for case', in Bach and Harms (1968).
- Fodor, J. and J. Katz (1962) 'What is wrong with the philosophy of language', Inquiry.
- Fodor, J. and J. Katz (1964) The Structure of Language: Readings in the Philosophy of Language, Englewood Cliffs, N.J.: Prentice-Hall.
- Fodor, J. and M. Garrett (1966) 'Some reflections on competence and performance', in J. Lyons and R. Wales eds., Psycholinguistics Papers, Edinburgh: Edinburgh University Press.
- Fodor, J., T. Bever and M. Garrett (1974) Psychology of Language, New York: Hill.
- Geach, P. and M. Black, eds. (1952) Translations from the Philosophical Writings of Gottlob Frege, Oxford: Basil Blackwell & Mott.

- Geach, P. (1967) Mental Acts, London: Routledge K. Paul.
- Goodman, N. (1971) 'A world of 'individuals'', in C. Landesman, ed., The Problem of Universal, New York: Basic Books, Inc. Publishers.
- Grice, H. (1957) 'Meaning', Philosophical Review.
- Grice, H. (1968) 'Utterer's meaning, sentence meaning, and work-meaning', Foundations of Language.
- Grice, H. (1969) 'Utterer's meaning and intentions', Philosophical Review.
- Hampshire, S. (1966) 'Interpretation of language: Words and concepts', in C. Mace ed., British Philosophy in the Midcentury, London: George Allen and Unwin Ltd.
- Harman, G. (1969) 'Linguistic competence and empiricism', in Hook (1969).
- Harman, G. and D. Davidson, eds. (1972) Semantics of Natural Language, New York: Humanities Press.
- Harris, Z. (1946) 'From morpheme to utterance'? Language.
- Hempel, C. (1966) Philosophy of Natural Science, Prentice-Hall, Inc. Englewood Cliffs, N.J.
- Hintikka, J. (1968) 'Are mathematical truths synthetic apriori?' Journal of Philosophy.
- Hintikka, J. (1973a) Logic, Language Games, and Information, Oxford: The Clarendon Press.
- Hintikka, J., J. Moravcsik and P. Suppes, eds. (1973b) Approaches to Natural Language, Dordrecht: Reidel Publishing Co.
- Hiz, H. (1973) 'On the rules of consequence for a natural language', The Monist.
- Hook, S., ed. (1969) Language and Philosophy, New York: New York University Press.
- Itkonen, E. (1975a) 'Transformational grammar and the philosophy of science', in E.F.K. Koerner, ed., The Transformational Generative Paradigm and Modern Linguistic Theory, Amsterdam/John Benjamin.

- Itkonen, E. (1975b) 'Concerning the relationship between linguistics and logic', University of Helsinki: Department of General Linguistics.
- Itkonen, E. (1976) 'Linguistics and empiricalness', University of Helsinki, Department of General Linguistics.
- Katz, J. (1964) 'Analyticity and contradiction in natural language', in Fodor and Katz (1964).
- Katz, J. (1966) The Philosophy of Language, New York: Harper & Row.
- Katz, J. (1967) 'Mentalism in linguistics', in L. Jakobovits and S. Miron, eds., Readings in the Psychology of Language, Englewood Cliffs, New Jersey.
- Katz, J. (1971) The Underlying Reality of Language, New York: Harper & Row.
- Katz, J. (1972) Semantic Theory, New York: Harper & Row.
- Katz, J. (1974) 'Where things now stand with the analytic-synthetic distinction', Synthese (1974).
- Katz, J. (1977) 'The advantage of semantic theory over predicate calculus in the representation of logical form in natural language, The Monist, July.
- Katz, J. and J. Fodor (1963) 'The structure of a semantic theory, Language.
- Katz, J. and D. Langendoen (1976) 'Pragmatics and presupposition', Language.
- Katz, J. and P. Postal (1964) An Integrated Theory of Linguistic Descriptions, Cambridge, Mass: M.I.T. Press.
- Kemery, (1963) 'Analyticity versus fuzziness', Synthese.
- Kneale, W. (1962) The Development of Logic, Oxford: At the Clarendon Press.
- Kripke, S. (1972) 'Naming and necessity', in Harman and Davidson (1972).
- Kuhn, R. (1962) The Structure of Scientific Revolution, Chicago: University of Chicago Press.

- Labov, W. (1975) 'Empirical foundations of linguistic theory', in R. Austerlitz, ed., The Scope of American Linguistics, Peter de Ridder Press.
- Lakoff, G. (1971) 'Generative semantics', in D. Steinberg and L. Jakobovitz, eds., Semantics, Cambridge: At the University Press.
- Lakoff, G. (1972) 'Semantics and natural logic', in Harman and Davidson (1972).
- Linsky, L. ed. (1952) Semantics and the Philosophy of Language, Urbana: University of Illinois Press.
- Linsky, L. (1972) 'Analytic/synthetic and semantic theory', in Harman and Davidson (1972).
- Luce, R., R. Bush and E. Galanter, eds. (1963) Handbook of Mathematical Psychology, Vol. 2, New York: John Wiley & Sons.
- Lyons, J. (1970) Chomsky, Fontana.
- Majumdar, T. (1976) 'The concept of man in political economy and economics', Mimeographed, New Delhi: Jawaharlal Nehru University.
- Malcom, N. (1962) Dreaming, London: Routledge and Kegan Paul.
- Malcom, N. (1967) 'The concept of dreaming', in Morick (1967).
- Martin, R. (1952) 'On analytic', Philosophical Studies
- Martin, R. (1969) On Ziff's "Natural and formal languages", in Hook (1969).
- Maxblack, C. (1965) The Nature of Mathematics: A Critical Survey, Routledge and Kegan Paul, Fifth impression.
- Morick, H., ed. (1967) Wittgenstein and the Problem of Other Mind, McGraw Hill Book Co.
- Maxblack, C. (1954) Problems of Analysis, Ithaca, New York: Cornell University Press.
- Miller, G. and N. Chomsky (1963) 'Finitary models of language users', in Luce, Bush and Gelanter (1963).

- Moody, E. (1953) Truth and Consequence in Mediaeval Logic, Amsterdam: North Holland Publishing Co.
- Moravcsik, J. (1967) 'Linguistic theory and the philosophy of language', Foundations of Language.
- Moravcsik, J. (1975) 'Aitia as generative factor in Aristotle's philosophy', Dialogue.
- Nagel, E. (1961) The structure of science, New York: Harcourt Brace Jovanovich.
- Nagel, T. (1969) 'Linguistics and epistemology', in Hook (1969).
- Pap, A. (1967) Semantics and Necessary Truth, New Haven, Conn.: Yale University Press.
- Peirece, C. (1957) 'The logic of abduction', in V. Tomas, ed. Peirece's Essays in the Philosophy of Science, New York: Liberal Arts Press.
- Piaget, J. (1954) The Construction of Reality in the Child, New York: Basic Books.
- Popper, K. (1972) Objective Knowledge, Oxford: At the Clarendon Press.
- Postal, P. (1964) Constituent Structure: A Study of Contemporary Models of Syntactic Description, The Hague: Mouton.
- Postal, P. (1966) 'Review of Andre Martinet, Elements of General Linguistics', Foundations of Language.
- Postal, P. (1971) 'On the surface verb 'remind'', in Fillmore and Langendoen (1971).
- Prior, M. and A. Prior (1955) 'Erotetic logic', The Philosophical Review.
- Putnam, H. (1970) 'Minds and machines', in S. Hook, ed. Dimensions of Mind, New York: Collier Books.
- Pylyshyn, Z. (1973) 'The role of competence theories in cognitive psychology', Journal of Psycholinguistic Research.

- Quine, W. (1951) Introduction to Mathematical Logic, Cambridge, Mass.: Harvard University Press.
- Quine, W. (1953) From a Logical Point of View, Cambridge, Mass.: Harvard University Press.
- Quine, W. (1960) Word and Object, Cambridge, Mass.: M.I.T. Press.
- Quine, W. (1967) 'On a suggestion of Katz', The Journal of Philosophy.
- Quine, W. (1969a) 'Reply to Chomsky', in Davidson and Hintikka (1969).
- Quine, W. (1969b) Linguistics and Philosophy, in Hook (1969).
- Quine, W. (1972) 'Methodological reflections on current linguistic theory, in Herman and Davidson (1972).
- Rogers, R. (1963) A survey of formal semantics, Synthese.
- Ross, J. (1970) 'On declarative sentences', in Jacobs, R. and P. Rosenbaum, eds. Readings in English Transformational Grammar, Watham, Mass.: Ginn & Co.
- Russell, B. (1956) An Inquiry into Meaning and Truth, London: George Allen and Unwin Ltd.
- Russell, B. (1956) Logic and Knowledge: Essays 1901-1950, R.C. Marsh, ed., London: George Allen and Unwin Ltd.
- Russell, B. (1959) My Philosophical Development, London: George Allen and Unwin.
- Russell, B. (1960) Our Knowledge of the External World, New York: The New American Library.
- Ryle, G. (1949) The Concept of Mind, London: Hutchinson.
- Ryle, G. (1953) 'Ordinary language', Philosophical Review.
- Ryle, G. (1961) 'Use Usage and Meaning', Proceedings of the Aristotelian Society, Supp. Vol. XXV.
- Ryle, G. (1967) 'Systematic misleading expressions', in R. Rorty, ed., The Linguistic Turn, Chicago: The University of Chicago Press.

- Schilpp, P., ed. (1963) The Philosophy of Rudolph Carnap, La Salle: Open Court.
- Schutz, A. (1963) 'Concept and theory formation in the social sciences', in M. Natanson, ed., Philosophy of Social Sciences, New York: Random House.
- Searle, J. (1969) Speech Acts, London: Cambridge University Press.
- Searle, J., ed. (1971) The Philosophy of Language, Oxford University Press.
- Sellars, W. (1964) 'Empiricism and the philosophy of mind', in Feigl and Scriven, eds. (1964).
- Sen, A. (1977) 'Rational fool: A critique of the behavioural foundations of economic theory', Philosophy and Public Affairs.
- Skinner, B. (1957) Verbal Behaviour, New York: Appleton Century-Crofts.
- Stich, S. (1971) 'What every speaker knows', Philosophical Review.
- Strawson, P. (1950) 'On referring', Mind.
- Strawson, P. (1952) Introduction to Logical Theory, London: Methuen.
- Strawson, P. (1963) 'Carnap's views on constructed system vs. natural language in analytical philosophy', in Schilpp (1963).
- Strawson, P. (1964) 'Identifying reference and truth values', Theoria.
- Strawson, P. (1967) 'Review of Wittgenstein's Philosophical Investigations', in Morick (1967).
- Strawson, P. (1971) 'Meaning, truth and communication', in N. Minnis, ed., Linguistics at Large, London: Victor Gollancz Ltd.
- Tarski, A. (1941) Introduction to Logic and Methodology of Deductive Sciences, New York: Oxford University Press.
- Tarski, A. (1956) Logic, Semantics and Metamathematics, London: Oxford University Press.

- Taylor, C. (1972) 'Interpretation and the sciences of man',
The Review of Metaphysics.
- Ullmann, S. (1962) Semantics: An Introduction to the Science
of Meaning, Oxford: Basil Blackwell and Mott.
- Urmson, J. (1956) Philosophical Analysis, Oxford at the
Clarendon Press.
- Vendler, Z. (1967) Linguistics in Philosophy, Ethaca, N.Y.:
Cornell University Press.
- vonWright, C. (1971) Explanation and Understanding, Ethaca,
N.Y.: Cornell University Press.
- Warnock, W. (1966) 'Metaphysics in logic', in A. Flew, ed.,
Essays in Conceptual Analysis, N.Y.: Macmillan St.
Martin Press.
- Weber, M. (1947) The Theory of Social and Economic
Organisation, New York: Oxford University Press.
- Winch, P. (1958) The Idea of a Social Science, London:
Routledge and Kegan Paul.
- Wittgenstein, L. (1921) Tractatus Logico-Philosophicus,
London: Routledge and Kegan Paul.
- Wittgenstein, L. (1953) Philosophical Investigations,
Oxford: Basil Blackwell and Mott.
- Wittgenstein, L. (1958) The Blue and the Brown Books,
Oxford: Basil Blackwell and Mott.